

## 17.5 Intel Material Declaration Data Sheets

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The Material Declaration Data Sheets (MDDS) contained in this chapter are based upon the format established by the Electronic Industries Alliance (EIA), The European Information and Communication Technology Association (EICTA) and the Japan Green Procurement Survey Standardization Initiative (JGPSSI). This format is published as the Joint Industry Guide for Material Composition Declaration and can be found at: <http://www.eia.org/resources/2003-09-19.10.pdf>

Most of the data sheets contained in this chapter are based on third-party analytical testing of the product specified in footnote #2 of each MDDS. If a product is not specified in footnote #2, the data listed in that MDDS are based on engineering estimates. Data sheets are organized by representative package types which cover the range of similar products. Since multiple products may be covered by a data sheet, data are reported in parts per million (ppm). Mass of the product is provided. Mass of individual materials can be calculated by the user as needed.

MDDSs for other package families will be added to this chapter as they become available. In addition, existing MDDSs will be updated periodically as additional data becomes available. Users of MDDS are responsible for consulting this chapter regularly to ensure they are using the most recent MDDS version.

INTEL ACCEPTS NO DUTY TO NOTIFY USERS ABOUT CHANGES TO AN MDDS. INTEL IS NOT LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, THAT THE READER MIGHT INCUR AS A RESULT OF IGNORING THIS WARNING, OR THAT ANY THIRD PARTY MIGHT SUFFER AS A RESULT OF THE READER'S IGNORING THIS WARNING.



May 2006

To whom it may concern:

Intel manufactures a wide range of products, from microprocessors, through embedded controllers, up to complete OEM systems. A large number of subassemblies and components are purchased from other manufacturers. Intel goes to great lengths to make sure all our products meet applicable legal requirements, and we continually monitor changes in those requirements. We have surveyed our products, and to the best of our knowledge, Intel products are in compliance with all applicable national and international laws and regulations, including those that may restrict the materials content of certain products.

Intel is frequently asked by its customer base about the presence of certain materials in its products. To the best of our knowledge, the following materials are not present in Intel products and are restricted by Intel's Environmental Product Content Specification for Suppliers and Outsourced Manufacturers (<http://supplier.intel.com/ehs/environmental.htm>):

- Asbestos
- Certain Azo Colorants
- Cadmium compounds (except as a plastic stabilizer where content must be < 100 ppm)
- Mercury compounds
- Ozone Depleting Substances (ODS)
- Polybrominated biphenyls and their ethers (PBB, PBDE)
- Polychlorinated biphenyls and terphenyls (PCB, PCT)
- Polychlorinated naphthalenes
- Short-chained chlorinated paraffins
- Tributyl tin (TBT) and Triphenyl tin (TPT)
- Tributyl tin oxide (TBTO)
- Hexavalent chromium

The information provided regarding the material content of our products is true and correct to the best of our knowledge and Intel has systems and due diligence processes in place to determine the content of our products and ensure compliance with all applicable laws and regulations. Furthermore, where Intel has identified products as RoHS compliant in the attached Material Declaration Data Sheets (MDDS), Intel defines RoHS compliance as Lead and other banned materials in the EU RoHS directive are either (1) below all applicable substance thresholds as proposed by the EU or (2) an approved exemption applies. (Note: RoHS implementing details are not fully defined and may change.)

Sincerely,

A handwritten signature in cursive script that reads "Linda L. Young".

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	Processor Number	Speed	FSB	Cache	Commit Object	MM#	RoHS Compliant	Boxed Processor MDDS	Link to the MDDS
Intel® Celeron® processor	n/a	1.8 GHz	400 MHz	256 KB	BX80532RC1800B	863423	N	n/a	
						867092	N	n/a	
	n/a	2.0 GHz	400 MHz	256 KB	BX80532RC2000B	852175	N	n/a	
	n/a	2.4 GHz	400 MHz	256 KB	BX80532RC2400B	852183	N	n/a	
						859735	N	n/a	
	n/a	2.5 GHz	400 MHz	256 KB	BX80532RC2500B	854307	N	n/a	
	n/a	2.6 GHz	400 MHz	256 KB	BX80532RC2600B	854947	N	n/a	
						852173	N	n/a	
Intel® Celeron® D processor	310	2.13 GHz	533 MHz	256 KB	BX80546RE2130C	874311	N	n/a	
						874307	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
						878053	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
	315	2.26 GHz	533 MHz	256 KB	BX80546RE2267C	873162	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
						877970	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
						868818	N	n/a	
	320	2.40 GHz	533 MHz	256 KB	BX80546RE2400C	868126	N	n/a	
						873165	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
	325	2.53 GHz	533 MHz	256 KB	BX80546RE2533C	873166	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
						868128	N	n/a	
	330	2.67 GHz	533 MHz	256 KB	BX80546RE2667C	868129	N	n/a	
						873170	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
	335	2.80 GHz	533 MHz	256 KB	BX80546RE2800C	868131	N	n/a	
						873171	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
	340	2.93 GHz	533 MHz	256 KB	BX80546RE2933C	868132	N	n/a	
						873174	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
	345	3.06 GHz	533 MHz	256 KB	BX80546RE3066C	868133	N	n/a	
						873173	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
	350	3.20 GHz	533 MHz	256 KB	BX80546RE3200C	868820	N	n/a	
						873175	Y	721, 742, 766	MddsDoc 721, MddsDoc 742, MddsDoc 766
Intel® Celeron® D processor	352	3.20 GHz	533 MHz	512 KB	BX80552352	879372	Y	871,874,875	MddsDoc 871, MddsDoc 874, MddsDoc 875
	356	3.33 GHz	533 MHz	512 KB	BX80552356	879371	Y	871,874,875	MddsDoc 871, MddsDoc 874, MddsDoc 875
Intel® Celeron® D processor	325J	2.53 GHz	533 MHz	256 KB	BX80547RE2533C	866286	N	n/a	
	326	2.53 GHz	533 MHz	256 KB	BX80547RE2533CN	871660	N	n/a	
						875345	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
						883000	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
	330J	2.67 GHz	533 MHz	256 KB	BX80547RE2667C	866287	N	n/a	
	331	2.67 GHz	533 MHz	256 KB	BX80547RE2667CN	871661	N	n/a	
	331	2.67 GHz	533 MHz	256 KB	BX80547RE2667CN	875355	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
						883001	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
	335J	2.80 GHz	533 MHz	256 KB	BX80547RE2800C	866288	N	n/a	
	336	2.80 GHz	533 MHz	256 KB	BX80547RE2800CN	871663	N	n/a	
	336	2.80 GHz	533 MHz	256 KB	BX80547RE2800CN	875352	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
						883003	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
	340J	2.93 GHz	533 MHz	256 KB	BX80547RE2933C	866291	N	n/a	
	341	2.93 GHz	533 MHz	256 KB	BX80547RE2933CN	871666	N	n/a	
						875351	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
						883002	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
	345J	3.06 GHz	533 MHz	256 KB	BX80547RE3066C	866289	N	n/a	
	346	3.06 GHz	533 MHz	256 KB	BX80547RE3066CN	871668	N	n/a	
						875354	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
						883005	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
	351	3.2 GHz	533 MHz	256 KB	BX80547RE3200CN	871670	N	n/a	
						875356	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767
						883004	Y	722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767

Intel® Pentium® 4 processor	355	3.33 GHz	533 MHz	256 KB	BX80547RE3330CN	875357 883401	Y Y	722, 743, 767 722, 743, 767	MddsDoc 722, MddsDoc 743, MddsDoc 767 MddsDoc 722, MddsDoc 743, MddsDoc 767
	631	3.0 GHz	800 MHz	2 MB	BX80552631	877345 879160 879364	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
						877344 879159 879363	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
						877343 879161 879365	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
	651	3.40 GHz	800 MHz	2 MB	BX80552651	877343 879161 879365	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
						877318 879158 879362	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
						877318 879158 879362	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
	661	3.60 GHz	800 MHz	2 MB	BX80552661	877318 879158 879362	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
						877318 879158 879362	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
						877318 879158 879362	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
	661	3.60 GHz	800 MHz	2 MB	BX80552661	877318 879158 879362	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
						877318 879158 879362	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
						877318 879158 879362	Y Y Y	723, 748, 768 723, 748, 768 723, 748, 768	MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768 MddsDoc 723, MddsDoc 748, MddsDoc 768
Intel® Pentium® 4 processor (BTX Type 2)	631	3.0 GHz	800 MHz	2 MB	BX80552631T2	879173 879370	Y Y	724 724	MddsDoc 724 MddsDoc 724
						879172 879369	Y Y	724 724	MddsDoc 724 MddsDoc 724
	641	3.20 GHz	800 MHz	2 MB	BX80552641T2	879172 879369	Y Y	724 724	MddsDoc 724 MddsDoc 724
						879171 879367	Y Y	724 724	MddsDoc 724 MddsDoc 724
	651	3.40 GHz	800 MHz	2 MB	BX80552651T2	879171 879367	Y Y	724 724	MddsDoc 724 MddsDoc 724
						879170 879368	Y Y	724 724	MddsDoc 724 MddsDoc 724
	661	3.60 GHz	800 MHz	2 MB	BX80552661T2	879170 879368	Y Y	724 724	MddsDoc 724 MddsDoc 724
						879170 879368	Y Y	724 724	MddsDoc 724 MddsDoc 724
Intel® Pentium® 4 processor	n/a	2.26 GHz	533 MHz	512 KB	BX80532PE2266D	850340 865663	N N	n/a n/a	
	n/a	2.8 GHz	533 MHz	512 KB	BX80532PE2800D	850335	N	n/a	
Intel® Pentium® 4 processor	n/a	2.8 GHz	800 MHz	512 KB	BX80532PG2800D	857011	N	n/a	
Intel® Pentium® 4 processor		2.40 GHz	533 MHz	1 MB	BX80546PE2400E	868042 873415	N Y	n/a 876,877,878	
						858652 861581	N N	n/a n/a	
						868043 873308	N Y	n/a 876,877,878	
						873414 873307	Y Y	876,877,878 876,877,878	MddsDoc 876, MddsDoc 877, MddsDoc 878 MddsDoc 876, MddsDoc 877, MddsDoc 878
		2.80 GHz	533 MHz	1 MB	BX80546PE2800E	861556 861585	N N	n/a n/a	
						868015 873306	N Y	n/a 876,877,878	
						858683 861586	N N	n/a n/a	
						868017 873309	N Y	n/a 876,877,878	
		3.0 GHz	800 MHz	1 MB	BX80546PG3000E	861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
		3.2 GHz	800 MHz	1 MB	BX80546PG3200E	861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
		3.40 GHz	800 MHz	1 MB	BX80546PG3400E	861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
						861587 873310	N Y	n/a 876,877,878	
Intel® Pentium® processor Extreme Edition	n/a	3.2 GHz	800 MHz	1 MB	BX80532PG3200F	857735	N	n/a	
	n/a	3.73 GHz	1066 MHz	2 MB	BX80547PH3733F	867772	N	n/a	
					BX80547PH3733F	875778	Y	725,749,770	MddsDoc 725, MddsDoc 749, MddsDoc 770
	955	3.46 GHz	1066 MHz	2 x 2 MB	BX80553955	876596 878912	Y Y	728, 753 728, 753	MddsDoc 728, MddsDoc 753 MddsDoc 728, MddsDoc 753
						880675	Y	728, 753	MddsDoc 728, MddsDoc 753
	965	3.73 GHz	1066 MHz	2 x 2 MB	BX80553965	880675	Y	728, 753	MddsDoc 728, MddsDoc 753
Intel® Core™ 2 Extreme processor	X6800	2.93 GHz	1066 MHz	2 x 2 MB	BX80557X6800	884552		964	MddsDoc 964
Intel® Pentium® 4 processor		2.66 GHz	533 MHz	1 MB	BX80547PE2667EN	872643 874330	N N	n/a n/a	
						881582 882982	Y Y	740,741,769 740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769 MddsDoc 740, MddsDoc 741, MddsDoc 769
		2.80 GHz	533 MHz	1 MB	BX80547PE2800EN	875437 875440	N N	n/a n/a	
						881583 882981	Y Y	740,741,769 740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769 MddsDoc 740, MddsDoc 741, MddsDoc 769
		2.80 GHz	533 MHz	1 MB	BX80547PE2800EN	875437 875440	N N	n/a n/a	
						881583 882981	Y Y	740,741,769 740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769 MddsDoc 740, MddsDoc 741, MddsDoc 769
		2.80 GHz	533 MHz	1 MB	BX80547PE2800EN	875437 875440	N N	n/a n/a	
						881583 882981	Y Y	740,741,769 740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769 MddsDoc 740, MddsDoc 741, MddsDoc 769



		3.06 GHz	533 MHz	1 MB	BX80547PE3066E	882073	Y	740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769
						881515	Y	740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769
Intel® Pentium® 4 processor	630	3.0 GHz	800 MHz	2 MB	BX80547PG3000F	869547	N	n/a	
	630	3.0 GHz	800 MHz	2 MB	BX80547PG3000F	875854	Y	740,741, 769	MddsDoc 740, MddsDoc 741, MddsDoc 769
	640	3.20 GHz	800 MHz	2 MB	BX80547PG3200F	869534	N	n/a	
	640	3.20 GHz	800 MHz	2 MB	BX80547PG3200F	875856	Y	740,741, 769	MddsDoc 740, MddsDoc 741, MddsDoc 769
	650	3.40 GHz	800 MHz	2 MB	BX80547PG3400F	869533	N	n/a	
	650	3.40 GHz	800 MHz	2 MB	BX80547PG3400F	875851	Y	740,741, 769	MddsDoc 740, MddsDoc 741, MddsDoc 769
	660	3.60 GHz	800 MHz	2 MB	BX80547PG3600F	869530	N	n/a	
	660	3.60 GHz	800 MHz	2 MB	BX80547PG3600F	875855	Y	725,749,770	MddsDoc 725, MddsDoc 749, MddsDoc 770
	670	3.80 GHz	800 MHz	2 MB	BX80547PG3800F	871076	N	n/a	
	670	3.80 GHz	800 MHz	2 MB	BX80547PG3800F	875852	Y	725,749,770	MddsDoc 725, MddsDoc 749, MddsDoc 770
Intel® Pentium® 4 processor (BTX Type 1)	531	3.0 GHz	800 MHz	1 MB	BX80547PG300EKT	872673	N	n/a	
	551	3.40 GHz	800 MHz	1 MB	BX80547PG340EKT	872651	N	n/a	
	561	3.60 GHz	800 MHz	1 MB	BX80547PG360EKT	872652	N	n/a	
	630	3.0 GHz	800 MHz	2 MB	BX80547PG3000FT	870314	N	n/a	
	630	3.0 GHz	800 MHz	2 MB	BX80547PG3000FT	875861	Y	726,750	MddsDoc 726, MddsDoc 750
	640	3.20 GHz	800 MHz	2 MB	BX80547PG3200FT	870313	N	n/a	
	640	3.20 GHz	800 MHz	2 MB	BX80547PG3200FT	875860	Y	726,750	MddsDoc 726, MddsDoc 750
	650	3.40 GHz	800 MHz	2 MB	BX80547PG3400FT	870312	N	n/a	
	650	3.40 GHz	800 MHz	2 MB	BX80547PG3400FT	875859	Y	726,750	MddsDoc 726, MddsDoc 750
	660	3.60 GHz	800 MHz	2 MB	BX80547PG3600FT	870311	N	n/a	
	660	3.60 GHz	800 MHz	2 MB	BX80547PG3600FT	875858	Y	751	MddsDoc 751
	670	3.80 GHz	800 MHz	2 MB	BX80547PG3800FT	871586	N	n/a	
	670	3.80 GHz	800 MHz	2 MB	BX80547PG3800FT	875857	Y	751	MddsDoc 751
	521	2.80 GHz	800 MHz	1 MB	BX80547PG2800EK	872438	N	n/a	
						874342	N	n/a	
Intel® Pentium® 4 processor	521	2.80 GHz	800 MHz	1 MB	BX80547PGP280EK	881585	Y	740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769
	531	3.0 GHz	800 MHz	1 MB	BX80547PG3000EK	874343	Y	740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769
						872649	N	n/a	
						884631	Y	740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769
	531J	3.0 GHz	800 MHz	1 MB	BX80547PG3000EJ	866896	N	n/a	
	541	3.20 GHz	800 MHz	1 MB	BX80547PG3200EK	874347	Y	740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769
						872650	N	n/a	
						884630	Y	740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769
	551	3.40 GHz	800 MHz	1 MB	BX80547PG3400EK	874344	Y	740,741,769	MddsDoc 740, MddsDoc 741, MddsDoc 769
						872646	N	n/a	
	561	3.60 GHz	800 MHz	1 MB	BX80547PG3600EK	872647	N	n/a	
	571	3.80 GHz	800 MHz	1 MB	BX80547PG3800EK	872648	N	n/a	
Intel® Pentium® D processor	915	2.80 GHz	800 MHz	2 x 2 MB	BX80553915	885739	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
						882680	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
	920	2.80 GHz	800 MHz	2 x 2 MB	BX80553920	876602	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
						878915	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
	920 (BTX Type 1)	2.80 GHz	800 MHz	2 x 2 MB	BX80553920T	876605	Y	729,754	MddsDoc 729, MddsDoc 754
						878921	Y	729,754	MddsDoc 729, MddsDoc 754
	920 (BTX Type 2)	2.80 GHz	800 MHz	2 x 2 MB	BX80553920T2	877516	Y	731	MddsDoc 731
						878922	Y	731	MddsDoc 731
	925	3.0 GHz	800 MHz	2 x 2 MB	BX80553925	884120	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
						885738	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
	930	3.0 GHz	800 MHz	2 x 2 MB	BX80553930	876603	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
						878916	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
						879463	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
	930 (BTX Type 1)	3.0 GHz	800 MHz	2 x 2 MB	BX80553930T	876604	Y	729,754	MddsDoc 729, MddsDoc 754
						878920	Y	729,754	MddsDoc 729, MddsDoc 754
						879467	Y	729,754	MddsDoc 729, MddsDoc 754
	930 (BTX Type 2)	3.0 GHz	800 MHz	2 x 2 MB	BX80553930T2	877515	Y	731	MddsDoc 731
						878919	Y	731	MddsDoc 731
						879468	Y	731	MddsDoc 731
	935	3.20 GHz	800 MHz	2 x 2 MB	BX80553935	884346	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771

	940	3.20 GHz	800 MHz	2 x 2 MB	BX80553940	876600	Y	728,753	MddsDoc 728, MddsDoc 753
						878544	Y	728,753	MddsDoc 728, MddsDoc 753
						878914	Y	728,753	MddsDoc 728, MddsDoc 753
						879461	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
	940 (BTX Type 1)	3.20 GHz	800 MHz	2 x 2 MB	BX80553940T	876601	N	n/a	
						878918	Y	729,754	MddsDoc 729, MddsDoc 754
						879466	Y	729,754	MddsDoc 729, MddsDoc 754
	940 (BTX Type 2)	3.20 GHz	800 MHz	2 x 2 MB	BX80553940T2	882010	Y	731	MddsDoc 731
	945	3.40 GHz	800 MHz	2 x 2 MB	BX80553945	884345	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
						885138	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
	950	3.40 GHz	800 MHz	2 x 2 MB	BX80553950	876598	Y	728,753	MddsDoc 728, MddsDoc 753
						885737	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
						885736	Y	728,753	MddsDoc 728, MddsDoc 753
						878913	Y	728,753	MddsDoc 728, MddsDoc 753
						879460	Y	727,752,771	MddsDoc 727, MddsDoc 752, MddsDoc 771
	950 (BTX Type 1)	3.40 GHz	800 MHz	2 x 2 MB	BX80553950T	876599	Y	729,754	MddsDoc 729, MddsDoc 754
						878917	Y	729,754	MddsDoc 729, MddsDoc 754
						879465	Y	TBD	
	960	3.60 GHz	800 MHz	2 x 2 MB	BX80553960	880688	Y	728,753	MddsDoc 728, MddsDoc 753
Intel® Pentium® D processor	805	2.66 GHz	533 MHz	2 x 1 MB	BX80551PE2666FN	879857	Y	733,755,772	MddsDoc 733, MddsDoc 755, MddsDoc 772
	820	2.80 GHz	800 MHz	2 x 1 MB	BX80551PG2800FN	871057	Y	733,755,772	MddsDoc 733, MddsDoc 755, MddsDoc 772
						871067	Y	733,755,772	MddsDoc 733, MddsDoc 755, MddsDoc 772
	820	2.80 GHz	800 MHz	2 x 1 MB	BX80551PG2800FT	871059	N	n/a	
						871381	N	n/a	
	820	2.80 GHz	800 MHz	2 x 1 MB	BX80551PG280FT2	877543	N	n/a	
	830	3.0 GHz	800 MHz	2 x 1 MB	BX80551PG3000FN	871053	N	n/a	
						871065	N	n/a	
	830	3.0 GHz	800 MHz	2 x 1 MB	BX80551PG3000FT	871056	N	n/a	
						871380	N	n/a	
	840	3.20 GHz	800 MHz	2 x 1 MB	BX80551PG3200FN	871050	N	n/a	
						871062	N	n/a	
Intel® Celeron® M processor	840	3.20 GHz	800 MHz	2 x 1 MB	BX80551PG3200FT	871051	N	n/a	
						871376	N	n/a	
	840	3.20 GHz	800 MHz	2 x 1 MB	BX80551PGH3200F	871377	N	n/a	
	350	1.30 GHz	400 MHz	1 MB	BXM80536NC1300E	865626	Y	744	MddsDoc 744
	350J	1.30 GHz	400 MHz	1 MB	BX80536NC1300EJ	868603	Y	744	MddsDoc 744
						874335	Y	744	MddsDoc 744
	360	1.40 GHz	400 MHz	1 MB	BXM80536NC1400E	865628	Y	744	MddsDoc 744
	360J	1.40GHz	400 MHz	1 MB	BX80536NC1400EJ	868602	Y	744	MddsDoc 744
						874328	Y	744	MddsDoc 744
	370	1.50 GHz	400 MHz	1 MB	BX80536NC1500EJ	868601	Y	744	MddsDoc 744
Intel® Pentium® M processor						874326	Y	744	MddsDoc 744
	380	1.60 GHz	400 MHz	1 MB	BX80536NC1600EJ	874325	Y	744	MddsDoc 744
	390	1.70 GHz	400 MHz	1 MB	BX80536NC1700EJ	874315	Y	744	MddsDoc 744
	725	1.60A GHz	400 MHz	2 MB	BXM80536GC1600F	862967	Y	744	MddsDoc 744
	735	1.70A GHz	400 MHz	2 MB	BXM80536GC1700F	861842	Y	744	MddsDoc 744
Intel® Pentium® M processor	745	1.80 GHz	400 MHz	2 MB	BXM80536GC1800F	861841	Y	744	MddsDoc 744
	755	2.0 GHz	400 MHz	2 MB	BXM80536GC2000F	861860	Y	744	MddsDoc 744
	765	2.10 GHz	400 MHz	2 MB	BXM80536GC2100F	865680	Y	744	MddsDoc 744
	730	1.60B GHz	533 MHz	2 MB	BX80536GE1600FJ	868609	Y	744	MddsDoc 744
	740	1.73 GHz	533 MHz	2 MB	BX80536GE1733FJ	868608	Y	744	MddsDoc 744
Intel® Celeron® M processor	750	1.86 GHz	533 MHz	2 MB	BX80536GE1866FJ	868607	Y	744	MddsDoc 744
	760	2.0A GHz	533 MHz	2 MB	BX80536GE2000FJ	868606	Y	744	MddsDoc 744
	770	2.13 GHz	533 MHz	2 MB	BX80536GE2133FJ	868605	Y	744	MddsDoc 744
	780	2.26 GHz	533 MHz	2 MB	BX80536GE2266FJ	868604	Y	744	MddsDoc 744
Intel® Celeron® M processor	410	1.46 GHz	533 MHz	1 MB	BX80538410	882667	Y	745	MddsDoc 745
	420	1.60 GHz	533 MHz	1 MB	BX80538420	880418	Y	745	MddsDoc 745
	430	1.73 GHz	533 MHz	1 MB	BX80538430	880419	Y	745	MddsDoc 745

	440	1.86 GHz	533 MHz	1 MB	BX80538440	885115	Y	745	MddsDoc 745
	450	2.0 GHz	533 MHz	1 MB	BX80538450	885112	Y	745	MddsDoc 745
Intel® Core™ Solo processor	T1300	1.66 GHz	667 MHz	2 MB	BX80538T1300	878614	Y	745	MddsDoc 745
	T1400	1.83 GHz	667 MHz	2 MB	BX80538T1400	882674	Y	745	MddsDoc 745
Intel® Core™ Duo processor	T2300	1.66 GHz	667 MHz	2 MB	BX80539T2300	878612	Y	745	MddsDoc 745
	T2300E	1.66 GHz	667 MHz	2 MB	BX80539T2300E	882668	Y	745	MddsDoc 745
	T2400	1.83 GHz	667 MHz	2 MB	BX80539T2400	878611	Y	745	MddsDoc 745
	T2500	2.0 GHz	667 MHz	2 MB	BX80539T2500	878609	Y	745	MddsDoc 745
	T2600	2.16 GHz	667 MHz	2 MB	BX80539T2600	878571	Y	745	MddsDoc 745
	T2700	2.33 GHz	667 MHz	2 MB	BX80539T2700	882980	Y	745	MddsDoc 745
Intel® Core™ 2 Duo processor	T5500	1.66 GHz	667 MHz	2 MB	BX80537T5500	885426	Y	745	MddsDoc 745
	T5600	1.83 GHz	667 MHz	2 MB	BX80537T5600	884604	Y	745	MddsDoc 745
	T7200	2.0 GHz	667 MHz	4 MB	BX80537T7200	884605	Y	745	MddsDoc 745
	T7400	2.16 GHz	667 MHz	4 MB	BX80537T7400	884606	Y	745	MddsDoc 745
	T7600	2.33 GHz	667 MHz	4 MB	BX80537T7600	884607	Y	745	MddsDoc 745
	E6700	2.67 GHz	1066 MHz	2 x 2 MB	BX805576700	884979	Y	963, 974, 975, 982, 1025	MddsDoc 963, MddsDoc 974, MddsDoc 975, MddsDoc 982, MddsDoc 1025
	E6600	2.4 GHz	1066 MHz	2 x 2 MB	BX805576600	884980	Y	963, 974, 975, 982, 1025	MddsDoc 963, MddsDoc 974, MddsDoc 975, MddsDoc 982, MddsDoc 1025
	E6400	2.13 GHz	1066 MHz	2 x 2 MB	BX805576400	884981	Y	963, 974, 975, 982, 1025	MddsDoc 963, MddsDoc 974, MddsDoc 975, MddsDoc 982, MddsDoc 1025
	E6300	1.86 GHz	1066 MHz	2 x 2 MB	BX805576300	884982	Y	963, 974, 975, 982, 1025	MddsDoc 963, MddsDoc 974, MddsDoc 975, MddsDoc 982, MddsDoc 1025
	E6300 (BTX)	1.86 GHz	1066 MHz	2 x 2 MB	BX805576300T2	884983	Y	963, 974, 975, 982, 1025	MddsDoc 963, MddsDoc 974, MddsDoc 975, MddsDoc 982, MddsDoc 1025
Dual-Core Intel® Xeon® processor	5160	3.0 GHz	1333 MHz	4 MB	BX805565160A	884515	Y	976,977	MddsDoc 976, MddsDoc 977
					BX805565160P	884516	Y	978,979	MddsDoc 978, MddsDoc 979
	5150	2.66 GHz	1333 MHz	4 MB	BX805565150A	884530	Y	976,977	MddsDoc 976, MddsDoc 977
					BX805565150P	884532	Y	978,979	MddsDoc 978, MddsDoc 979
	5140	2.33 GHz	1333 MHz	4 MB	BX805565140A	884533	Y	976,977	MddsDoc 976, MddsDoc 977
					BX805565140P	884529	Y	978,979	MddsDoc 978, MddsDoc 979
	5130	2.0 GHz	1333 MHz	4 MB	BX805565130A	884534	Y	976,977	MddsDoc 976, MddsDoc 977
					BX805565130P	884531	Y	978,979	MddsDoc 978, MddsDoc 979
	5120	1.86 GHz	1066 MHz	4 MB	BX805565120A	884536	Y	976,977	MddsDoc 976, MddsDoc 977
					BX805565120P	884537	Y	978,979	MddsDoc 978, MddsDoc 979
	5110	1.60 GHz	1066 MHz	4 MB	BX805565110A	884538	Y	976,977	MddsDoc 976, MddsDoc 977
					BX805565110P	884539	Y	978,979	MddsDoc 978, MddsDoc 979
	5080	3.73 GHz	1066 MHz	2 x 2 MB	BX805555080A	879279	Y	788,965	MddsDoc 788, MddsDoc 965
					BX805555080P	879730	Y	789,790	MddsDoc 789, MddsDoc 790
	5060	3.2 GHz	1066 MHz	2 x 2 MB	BX805555060A	879733	Y	788,965	MddsDoc 788, MddsDoc 965
					BX805555060P	879740	Y	789,790	MddsDoc 789, MddsDoc 790
	5050	3.0 GHz	667 MHz	2 x 2 MB	BX805555050A	879824	Y	788,965	MddsDoc 788, MddsDoc 965
					BX805555050P	879755	Y	789,790	MddsDoc 789, MddsDoc 790
	5030	2.66 GHz	667 MHz	2 x 2 MB	BX805555030A	879757	Y	788,965	MddsDoc 788, MddsDoc 965
					BX805555030P	879758	Y	789,790	MddsDoc 789, MddsDoc 790
	3070	2.67 GHz	1066 MHz	4 MB	BX805573070	885771	Y	1027, 1028, 1029, 1030, 1031	MddsDoc 1027, MddsDoc 1028, MddsDoc 1029, MddsDoc 1030, MddsDoc 1031
	3060	2.4 GHz	1066 MHz	4 MB	BX805573060	885772	Y	1027, 1028, 1029, 1030, 1031	MddsDoc 1027, MddsDoc 1028, MddsDoc 1029, MddsDoc 1030, MddsDoc 1031
	3050	2.13 GHz	1066 MHz	2 MB	BX805573050	885773	Y	1027, 1028, 1029, 1030, 1031	MddsDoc 1027, MddsDoc 1028, MddsDoc 1029, MddsDoc 1030, MddsDoc 1031
	3040	1.86 GHz	1066 MHz	2 MB	BX805573040	885774	Y	1027, 1028, 1029, 1030, 1031	MddsDoc 1027, MddsDoc 1028, MddsDoc 1029, MddsDoc 1030, MddsDoc 1031
Dual-Core Intel® Xeon® processor LV	5148	2.33 GHz	1333 MHz	2 x 2 MB	BX805565148A	884507	Y	976,977	MddsDoc 976, MddsDoc 977
					BX805565148P	884510	Y	978,979	MddsDoc 978, MddsDoc 979
Intel® Xeon® processor MP		3.16 GHz	667 MHz	1 MB	BX80546KF3160E	870069	N	n/a	
					BX80546KF3160E	875509	Y	980	MddsDoc 980

Intel® Xeon® processor MP		3.66 GHz	667 MHz	1 MB	BX80546KF3660E	870075	N	n/a	
					BX80546KF3660E	875510	Y	980	MddsDoc 980
		2.0 GHz	400 MHz	1 MB	BX80532KC2000E	855003	N	n/a	
		2.50 GHz	400 MHz	1 MB	BX80532KC2500E	855004	N	n/a	
		2.20 GHz	400 MHz	2 MB	BX80532KC2200F	857558	N	n/a	
		2.70 GHz	400 MHz	2 MB	BX80532KC2700F	857562	N	n/a	
Intel® Xeon® processor		2.80 GHz	400 MHz	2 MB	BX80532KC2800F	855005	N	n/a	
		3.0 GHz	400 MHz	4 MB	BX80532KC3000H	857561	N	n/a	
		2.80 GHz	800 MHz	2 MB	BX80546KG2800FA	867572	N	n/a	
						873399	Y	739, 774	MddsDoc 739, MddsDoc 774
		2.80 GHz	800 MHz	2 MB	BX80546KG2800FP	873438	N	n/a	
		3.0 GHz	800 MHz	2 MB	BX80546KG2800FU	867573	N	n/a	
						873435	Y	779	MddsDoc 779
		2.80 GHz	800 MHz	2 MB	BX80546KG2800FP	867574	N	n/a	
		3.0 GHz	800 MHz	2 MB	BX80546JG3000FA	876787	Y	739, 774	MddsDoc 739, MddsDoc 774
		3.0 GHz	800 MHz	2 MB	BX80546KG3000FA	867568	N	n/a	
						867559	N	n/a	
						873396	Y	739, 774	MddsDoc 739, MddsDoc 774
		3.0 GHz	800 MHz	2 MB	BX80546JG3000FU	876791	Y	779	MddsDoc 779
		3.0 GHz	800 MHz	2 MB	BX80546KG3000FU	867569	N	n/a	
						867561	N	n/a	
						873433	Y	779	MddsDoc 779
		3.0 GHz	800 MHz	2 MB	BX80546JG3000FP	876792	Y	775, 776	MddsDoc 775, MddsDoc 776
		3.0 GHz	800 MHz	2 MB	BX80546KG3000FP	867570	N	n/a	
						867562	N	n/a	
						873441	Y	775, 776	MddsDoc 775, MddsDoc 776
		3.0 GHz	800 MHz	2 MB	BX80546KG3200FA	867558	N	n/a	
						867551	N	n/a	
						873397	Y	739, 774	MddsDoc 739, MddsDoc 774
		3.20 GHz	800 MHz	2 MB	BX80546KG3200FP	867556	N	n/a	
		3.20 GHz	800 MHz	2 MB	BX80546KG3200FU	867555	N	n/a	
		3.20 GHz	800 MHz	2 MB	BX80546KG3200FU	867560	N	n/a	
						873434	Y	779	MddsDoc 779
		3.0 GHz	800 MHz	2 MB	BX80546KG3200FP	867565	N	n/a	
						873436	Y	775, 776	MddsDoc 775, MddsDoc 776
		3.0 GHz	800 MHz	2 MB	BX80546KG3400FA	867550	N	n/a	
						867545	N	n/a	
						873398	Y	739, 774	MddsDoc 739, MddsDoc 774
		3.0 GHz	800 MHz	2 MB	BX80546KG3400FU	867552	N	n/a	
						867547	N	n/a	
						873432	Y	779	MddsDoc 779
		3.0 GHz	800 MHz	2 MB	BX80546KG3400FP	867554	N	n/a	
						867549	N	n/a	
						873440	Y	775, 776	MddsDoc 775, MddsDoc 776
		3.0 GHz	800 MHz	2 MB	BX80546KG3600FA	867544	N	n/a	
						867540	N	n/a	
						873394	Y	739, 774	MddsDoc 739, MddsDoc 774
		3.0 GHz	800 MHz	2 MB	BX80546KG3600FU	867546	N	n/a	
						867542	N	n/a	
						873431	Y	779	MddsDoc 779
		3.0 GHz	800 MHz	2 MB	BX80546KG3600FP	867548	N	n/a	
						867543	N	n/a	
						873437	Y	775, 776	MddsDoc 775, MddsDoc 776
		3.80 GHz	800 MHz	2 MB	BX80546KG3800FA	867529	N	n/a	
						873395	Y	739, 774	MddsDoc 739, MddsDoc 774
		3.0 GHz	800 MHz	2 MB	BX80546KG3800FU	867533	N	n/a	
						873430	Y	779	MddsDoc 779
		3.0 GHz	800 MHz	2 MB	BX80546KG3800FP	867534	N	n/a	
						873439	Y	775, 776	MddsDoc 775, MddsDoc 776

Intel® Xeon® processor		2.80 GHz	800 MHz	1 MB	BX80546KG2800EA	861133	N	n/a	
						861112	N	n/a	
						864775	N	n/a	
						865824	N	n/a	
		2.80 GHz	800 MHz	1 MB	BX80546KG2800EU	861135	N	n/a	
						861115	N	n/a	
						864792	N	n/a	
						865829	N	n/a	
		2.80 GHz	800 MHz	1 MB	BX80546KG2800EP	861134	N	n/a	
						861114	N	n/a	
						864789	N	n/a	
						865827	N	n/a	
		3.0 GHz	800 MHz	1 MB	BX80546KG3000EA	861136	N	n/a	
						861116	N	n/a	
						865681	N	n/a	
						865831	N	n/a	
		3.0 GHz	800 MHz	1 MB	BX80546KG3000EU	861138	N	n/a	
						861118	N	n/a	
						865700	N	n/a	
						865835	N	n/a	
		3.0 GHz	800 MHz	1 MB	BX80546KG3000EP	861137	N	n/a	
						861117	N	n/a	
						865682	N	n/a	
						865833	N	n/a	
		3.20 GHz	800 MHz	1 MB	BX80546KG3200EA	861139	N	n/a	
						861119	N	n/a	
						865704	N	n/a	
						865837	N	n/a	
		3.20 GHz	800 MHz	1 MB	BX80546KG3200EU	861141	N	n/a	
						861121	N	n/a	
						865709	N	n/a	
						865839	N	n/a	
		3.20 GHz	800 MHz	1 MB	BX80546KG3200EP	861140	N	n/a	
						861120	N	n/a	
						865706	N	n/a	
						865838	N	n/a	
		3.40 GHz	800 MHz	1 MB	BX80546KG3400EA	861142	N	n/a	
						861122	N	n/a	
						865736	N	n/a	
						865841	N	n/a	
		3.40 GHz	800 MHz	1 MB	BX80546KG3400EU	861144	N	n/a	
						861124	N	n/a	
						865738	N	n/a	
						865842	N	n/a	
		3.40 GHz	800 MHz	1 MB	BX80546KG3400EP	861143	N	n/a	
						861123	N	n/a	
						865737	N	n/a	
						865840	N	n/a	
		3.60 GHz	800 MHz	1 MB	BX80546KG3600EA	865740	N	n/a	
						865843	N	n/a	
		3.60 GHz	800 MHz	1 MB	BX80546KG3600EU	865742	N	n/a	
						865845	N	n/a	
		3.60 GHz	800 MHz	1 MB	BX80546KG3600EP	865739	N	n/a	
						865844	N	n/a	
Intel® Xeon® processor MP	7020	2.66 GHz	667 MHz	2 x 1 MB	BX80560KF2660F	875907	Y	787	MddsDoc 787
	7040	3.0 GHz	667 MHz	2 x 2 MB	BX80560KF3000H	875922	Y	787	MddsDoc 787
	7030	2.80 GHz	800 MHz	2 x 1 MB	BX80560KG2800F	875920	Y	787	MddsDoc 787
	7041	3.0 GHz	800 MHz	2 x 2 MB	BX80560KG3000H	876025	Y	787	MddsDoc 787
	7110	2.6 GHz	800 MHz		BX805507110M	883875	Y		

	7120	3.0 GHz	800 MHz		BX805507120M	883332	Y		
	7130	3.2 GHz	800 MHz		BX805507130M	883331	Y		
	7140	3.4 GHz	800 MHz		BX805507140M	883341	Y		
Intel® Xeon® processor		2.80 GHz	800 MHz	2 x 2 MB	BX80551KG2800HA	876026	Y	765, 781	MddsDoc 765, MddsDoc 781
		2.80 GHz	800 MHz	2 x 2 MB	BX80551KG2800HP	876028	Y	783, 786	MddsDoc 783, MddsDoc 786
		2.80 GHz	800 MHz	2 x 2 MB	BX80551KG2800HU	876027	Y	785	MddsDoc 785
Intel® Xeon® processor MP		2.83 GHz	667 MHz	4 MB	BX80546KF2833H	870300	Y	787	MddsDoc 787
		3.0 GHz	667 MHz	8 MB	BX80546KF3000M	870151	Y	787	MddsDoc 787
		3.33GHz	667 MHz	8 MB	BX80546KF3333M	870153	Y	787	MddsDoc 787
Intel® Xeon® processor		2.40 GHz	533 MHz	1 MB	BX80532KE2400E	859259	N	n/a	
						858920	N	n/a	
		2.40 GHz	533 MHz	1 MB	BX80532KE2400EU	859265	N	n/a	
						858919	N	n/a	
		2.80 GHz	533 MHz	1 MB	BX80532KE2800E	859264	N	n/a	
						858918	N	n/a	
		2.80 GHz	533 MHz	1 MB	BX80532KE2800EU	859266	N	n/a	
						858915	N	n/a	
		3.06 GHz	533 MHz	1 MB	BX80532KE3066E	854964	N	n/a	
						854411	N	n/a	
		3.06 GHz	533 MHz	1 MB	BX80532KE3066EU	855690	N	n/a	
						854412	N	n/a	
		3.20 GHz	533 MHz	1 MB	BX80532KE3200E	855692	N	n/a	
						854413	N	n/a	
		3.20 GHz	533 MHz	1 MB	BX80532KE3200EU	855691	N	n/a	
						854414	N	n/a	
		3.20 GHz	533 MHz	2 MB	BX80532KE3200F	858927	N	n/a	
		3.20 GHz	533 MHz	2 MB	BX80532KE3200FU	858928	N	n/a	
		2.40 GHz	533 MHz	512 KB	BX80532KE2400D	854968	N	n/a	
						854957	N	n/a	
						854405	N	n/a	
		2.40 GHz	533 MHz	512 KB	BX80532KE2400DU	854969	N	n/a	
						854958	N	n/a	
		2.66 GHz	533 MHz	512 KB	BX80532KE2667D	854971	N	n/a	
		2.66 GHz	533 MHz	512 KB	BX80532KE2667DU	854972	N	n/a	
		2.80 GHz	533 MHz	512 KB	BX80532KE2800D	854973	N	n/a	
						854961	N	n/a	
		2.80 GHz	533 MHz	512 KB	BX80532KE2800DU	854976	N	n/a	
						854963	N	n/a	
		3.06 GHz	533 MHz	512 KB	BX80532KE3066D	854977	N	n/a	
		3.06 GHz	533 MHz	512 KB	BX80532KE3066DU	860354	N	n/a	
Intel® Xeon® processor LV		1.66 GHz	667 MHz	2 MB	BX80539KF16672M	881982	Y	747	MddsDoc 747
		2.0 GHz	667 MHz	2 MB	BX80539KF20002M	881981	Y	747	MddsDoc 747
Intel® Itanium® 2 processor LV		1.30 GHz	400 MHz	3 MB	BX80543JC1300G	875045	N	TBD	
						866092	N	TBD	
					BX80543JC1300GD	875049	N	TBD	
						866099	N	TBD	
	9052	1.6GHz	533MHz	24MB	BX805499052	883767	N	TBD	
Intel® Itanium® 2 processor		1.0 GHz	400 MHz	1.5 MB	ATG10G15LVCPU	856606	N	TBD	
		1.0 GHz	400 MHz	1.5 MB	ATG10G15LVCPU05	856641	N	TBD	
		1.4 GHz	400 MHz	1.5 MB	ATG14G15MCPU	856642	N	TBD	
		1.4 GHz	400 MHz	1.5 MB	ATG14G15MCPU05	856643	N	TBD	
		1.3GHz	400MHz	3MB	ATG13G3MCPUHS	855100	N	TBD	
		1.3GHz	400MHz	3MB	ATG13G3MCPUHS05	855114	N	TBD	
		1.4GHz	400MHz	3MB	BX80543KC1400G	861392	N	TBD	
		1.4GHz	400MHz	3MB	BX80543KC1400GD	861389	N	TBD	
		1.6GHz	400MHz	3MB	BX80543KC1600G	875043	N	TBD	
						865961	N	TBD	
						861386	N	TBD	
		1.6GHz	400MHz	3MB	BX80543KC1600GD	875047	N	TBD	

						865989	N	TBD	
						861388	N	TBD	
		1.4GHz	400MHz	4MB	ATG14G4MCPUHS	855101	N	TBD	
		1.4GHz	400MHz	4MB	ATG13G3MCPUHS05	855115	N	TBD	
		1.5GHz	400MHz	4MB	BX80543KC1500H	864776	N	TBD	
						874986	N	TBD	
		1.5GHz	400MHz	4MB	BX80543KC1500HD	864765	N	TBD	
						875051	N	TBD	
		1.5GHz	400MHz	6MB	ATG15G6MCPUHS	855102	N	TBD	
		1.5GHz	400MHz	6MB	ATG15G6MCPUHS05	855116	N	TBD	
		1.6GHz	400MHz	6MB	BX80543KC1600J	864770	N	TBD	
						875042	N	TBD	
		1.6GHz	400MHz	6MB	BX80543KC1600JD	864767	N	TBD	
						875046	N	TBD	
		1.6GHz	400MHz	9MB	BX80543KC1600K	867433	N	TBD	
						875050	N	TBD	
		1.6GHz	400MHz	9MB	BX80543KC1600KD	867435	N	TBD	
						874988	N	TBD	
Intel® Itanium® 2 processor	9010	1.6GHz	533MHz	6MB	BX805499010	883775	Y	981	MddsDoc 981
						885382	Y	981	MddsDoc 981
	9015	1.4GHz	400MHz	12MB	BX805499015	883776	Y	981	MddsDoc 981
	9020	1.42GHz	533MHz	12MB	BX805499020	883773	Y	981	MddsDoc 981
						885381	Y	981	MddsDoc 981
	9030	1.6GHz	533MHz	8MB	BX805499030	883774	Y	981	MddsDoc 981
						885380	Y	981	MddsDoc 981
	9040	1.6GHz	533MHz	18MB	BX805499040	883772	Y	981	MddsDoc 981
						885379	Y	981	MddsDoc 981
	9050	1.6GHz	533MHz	24MB	BX805499050	883771	Y	981	MddsDoc 981
						885374	Y	981	MddsDoc 981



## Material Declaration Data Sheet

Boxed Prescott ICP Skt-N (SDJ)

BX80546RExxxxC

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 469.70

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.



	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	uFCPGA2-J: Resin Parts (Frame, insulator, etc.)	4700
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Resin Parts (Frame, insulator, etc.)	1800
Brominated Flame Retardant	Flame retardant	Prescott: Epoxy encapsulation material	4730
Nickel	Electronic and Mechanical components and materials	Prescott: Substrate / SLI	8050

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546RExxxC. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott ICP Skt-T (SDJ)

BX80547RExxxxC

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 411.90

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Electronic components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Electronic components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-F: Resin parts (Frame, insulator, etc.)	3300
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Resin parts (Frame, insulator, etc.)	12000
Brominated Flame Retardant	Flame retardant	Prescott Skt-T: Epoxy encapsulation material/Subst	1870
Nickel	Electronic and Mechanical components and materials	Prescott Skt-T: Substrate	12000

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547RExxxC. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed CedarMill ATX (SDJ)

BX80556x1

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 512.40

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	2700
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	9400
Brominated Flame Retardant	Flame retardant	Cedar Mill	2130
Nickel	Electronic and Mechanical components and materials	Cedar Mill	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80556x1. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed CedarMill BTX (Type 2)

BX80556x1T2

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 857.40

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-K: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-K: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-K: Resin Parts (Frame, Insulator, etc.)	9500
Brominated Flame Retardant	Flame retardant	FCLGA4-K: Resin Parts (Frame, Insulator, etc.)	37000
Brominated Flame Retardant	Flame retardant	Cedar Mill:	2130
Nickel	Electronic and Mechanical components and materials	Cedar Mill:	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80556x1T2. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-T EE (SDJ)

BX80547Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 511.90

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.



	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	2700
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	9400
Brominated Flame Retardant	Flame retardant	Prescott: Epoxy encapsulation material/Substrate	1870
Nickel	Electronic and Mechanical components and materials	Prescott: Substrate	12000

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Prescott Skt-T BTX Type-1 MS (SDJ)  
BX80547PGxxxxT  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 991.90  
Manufacturer: Intel Corporation  
Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Electronic components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Electronic components	850000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Bearing house	32000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-G: Resin parts (Frame, insulator, etc.)	10000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Resin parts (Frame, insulator, etc.)	39000
Brominated Flame Retardant	Flame retardant	Prescott Skt-T: Epoxy encapsulation material/Subst	1870
Nickel	Electronic and Mechanical components and materials	Prescott Skt-T: Substrate	12000

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547PGxxxxxT. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Presler ATX 05A (SDJ)

BX805539xx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 512.40

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	2700
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	9400
Brominated Flame Retardant	Flame retardant	Presler:	2130
Nickel	Electronic and Mechanical components and materials	Presler:	7710

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX805539xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Presler ATX 05B (SDJ)  
BX805539xx  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 597.40  
Manufacturer: Intel Corporation  
Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-D: Resin parts (Frame, Insulator, etc.)	2200
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Resin parts (Frame, Insulator, etc.)	8300
Brominated Flame Retardant	Flame retardant	Presler:	2130
Nickel	Electronic and Mechanical components and materials	Presler:	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805539xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Presler BTX Type-1 (SDJ)

BX805539xxT

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 992.40

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Electronic components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Electronic components	850000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Bearing house	32000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.



	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-G: Resin parts (Frame, insulator, etc.)	10000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Resin parts (Frame, insulator, etc.)	39000
Brominated Flame Retardant	Flame retardant	Presler:	2130
Nickel	Electronic and Mechanical components and materials	Presler:	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805539xxT. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Presler BTX Type-2 (SDJ)

BX805539xxT2

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 857.40

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-K: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-K: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-K: Resin Parts (Frame, Insulator, etc.)	9500
Brominated Flame Retardant	Flame retardant	FCLGA4-K: Resin Parts (Frame, Insulator, etc.)	37000
Brominated Flame Retardant	Flame retardant	Presler:	2130
Nickel	Electronic and Mechanical components and materials	Presler:	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805539xxT2. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Smithfield ATX 05A (SDJ)

BX80551Pxxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 512.40

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	2700
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	9400
Brominated Flame Retardant	Flame retardant	Smithfield: Epoxy encapsulation material/Substrate	15300
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Smithfield ATX 05A (SDJ)

BX80551Pxxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 512.40

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	2700
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Resin Parts (Frame, Insulator, etc.)	9400
Brominated Flame Retardant	Flame retardant	Smithfield: Epoxy encapsulation material/Substrate	15300
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Smithfield BTX Type-1 (SDJ)  
BX80551PxxxxxT  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 991.90  
Manufacturer: Intel Corporation  
Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Electronic components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Electronic components	850000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Bearing house	32000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.



	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-G: Resin parts (Frame, insulator, etc.)	10000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Resin parts (Frame, insulator, etc.)	39000
Brominated Flame Retardant	Flame retardant	Smithfield: Epoxy encapsulation material/Substrate	15300
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551PxxxxxT. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Smithfield BTX Type-2 (SDJ)  
BX80551PxxxxxT2  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 856.90  
Manufacturer: Intel Corporation  
Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-K: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-K: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-K: Resin Parts (Frame, Insulator, etc.)	9500
Brominated Flame Retardant	Flame retardant	FCLGA4-K: Resin Parts (Frame, Insulator, etc.)	37000
Brominated Flame Retardant	Flame retardant	Smithfield: Epoxy encapsulation material/Substrate	15300
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551PxxxxT2. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Irwindale Active (NDJ)

BX80546KGxxxxFA

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 1017.50

Manufacturer: Intel Corporation

Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Drive IC	881000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Resistor	6500
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Resistor	4000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Resistor	41400
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Transistor	925000

## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	uFCPGA4-A: Insulator (lower)	100000
Antimony	Flame retardant	uFCPGA4-A: Impeller	58000
Antimony	Flame retardant	uFCPGA4-A: Housing	58000
Antimony	Flame retardant	uFCPGA4-A: Diode	8500
Antimony	Flame retardant	uFCPGA4-A: Diode	5700
Antimony	Flame retardant	uFCPGA4-A: Hall element	12000
Antimony	Flame retardant	uFCPGA4-A: Drive IC	5100
Antimony	Flame retardant	uFCPGA4-A: Drive IC	13100
Antimony	Flame retardant	uFCPGA4-A: Drive IC	12500
Antimony	Flame retardant	uFCPGA4-A: Connector	7693
Antimony	Flame retardant	uFCPGA4-A: Transistor	5400
Antimony	Flame retardant	uFCPGA4-A: Transistor	8800
Antimony	Flame retardant	uFCPGA4-A: Transistor	6600
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Impeller	100000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Housing	100000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Diode	29900
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Diode	14400
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Hall element	8000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Drive IC	5100
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Drive IC	13100
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: PCB	150000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Transistor	17500
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Transistor	8800
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Transistor	20800
Brominated Flame Retardant	Flame retardant	Irwindale: Epoxy encapsulation material	5810
Nickel	Electronic and Mechanical components and materials	Irwindale: Substrate / SLI	5620
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Capacitor	12800
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Capacitor	42000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Capacitor	65000

Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Resistor	35900
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Shaft	1900
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Coil Spring	84100
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Spacer	94500
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Screw	96200

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546KGxxxxFA. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-T (SDJ)

BX80547Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 411.90

Manufacturer: Intel Corporation

Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Electronic components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Electronic components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-F: Resin parts (Frame, insulator, etc.)	3300
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Resin parts (Frame, insulator, etc.)	12000
Brominated Flame Retardant	Flame retardant	Prescott Skt-T: Epoxy encapsulation material/Subst	1870
Nickel	Electronic and Mechanical components and materials	Prescott Skt-T: Substrate	12000

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.





## Material Declaration Data Sheet

Boxed Prescott Skt-T (NDJ)

BX80547Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 356.90

Manufacturer: Intel Corporation

Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Diode	9000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Drive IC	5000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Resistor	31900

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Nickel	Electronic and Mechanical components and materials	Prescott: Substrate	12000

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Prescott ICP Skt-N (NDJ)

BX80546RExxx C

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 459.70

Manufacturer: Intel Corporation

Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Prescott: Epoxy encapsulation material	4730
Lead/Lead Compounds	Electronic Components and Materials	Prescott: Substrate / SLI	8050
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Drive IC	881000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Resistor	7300
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Resistor	1900
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Resistor	42400

## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	uFCPGA2-J: Insulator (Lower)	100000
Antimony	Flame retardant	uFCPGA2-J: Impeller	58000
Antimony	Flame retardant	uFCPGA2-J: Housing	58000
Antimony	Flame retardant	uFCPGA2-J: Diode	5700
Antimony	Flame retardant	uFCPGA2-J: Hall element	12000
Antimony	Flame retardant	uFCPGA2-J: Drive IC	13100
Bismuth	Main Material	uFCPGA2-J: Thermistor	6980
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Insulator (Lower)	100000
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Impeller	100000
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Housing	100000
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Diode	14400
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Hall element	8000
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Drive IC	13100
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: PCB	23000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Ball bearing (outer ring)	20000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Ball bearing (inner ring):	20000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Ball bearing (ball):	40000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Ball bearing (board):	91500
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Coil spring	84100
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Shaft	1900
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Resistor	35900
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Resistor	23100

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546RExxxC. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott ICP Skt-T (NDJ)

BX80547RExxxxC

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 356.90

Manufacturer: Intel Corporation

Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Diode	9000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Drive IC	5000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Resistor	41400

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds

Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)
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If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-F: Insulator (Lower)	100000
Antimony	Flame retardant	FCLGA4-F: Impeller	58000
Antimony	Flame retardant	FCLGA4-F: Housing	58000
Antimony	Flame retardant	FCLGA4-F: Diode	8500
Antimony	Flame retardant	FCLGA4-F: Diode	5700
Antimony	Flame retardant	FCLGA4-F: Hall element	12000
Antimony	Flame retardant	FCLGA4-F: Drive IC	5100
Antimony	Flame retardant	FCLGA4-F: Connector	6900
Antimony	Flame retardant	FCLGA4-F: Transistor	6600
Bismuth	Main Material	FCLGA4-F: Thermistor	6980
Brominated Flame Retardant	Flame retardant	Prescott: Epoxy encapsulation material/Substrate	1870
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Insulator (Lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Drive IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Drive IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Transistor	20800
Brominated Flame Retardant	Flame retardant	FCLGA4-F: PCB	90000
Nickel	Electronic and Mechanical components and materials	Prescott: Substrate	12000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Resistor	29100
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Ball Bearing	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Ball FCLGA4-F: Bearing (FCLGA4-F: Board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Coil Spring	84100

## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547RExxxC. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Dothan processors  
BX80536xxxxxxx,  
BXM80536xxxxxxx  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 4.80  
Manufacturer: Intel Corporation  
Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Dothan: FLI	3160

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	Dothan: solder	1380
Brominated Flame Retardant	Flame retardant	Dothan: Epoxy encapsulation	12800
Nickel	Electronic and Mechanical components and materials	Dothan: Substrate/SLI	15500

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80536xxxxxxx, BXM80536xxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Yonah processor  
BX80537T, BX80538xxx,  
BX80538Txxxx,  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 6.40  
Manufacturer: Intel Corporation  
Revision Date: 9/7/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Yonah	16900
Nickel	Electronic and Mechanical components and materials	Yonah	17100

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80537T, BX80538xxx, BX80538Txxxx,. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Sossaman  
BX80539KFxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 6.30  
Manufacturer: Intel Corporation  
Revision Date: 6/20/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	Sossaman:	1410
Brominated Flame Retardant	Flame retardant	Sossaman:	5200
Nickel	Electronic and Mechanical components and materials	Sossaman:	14100

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80539KFxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed CedarMill ATX (NDJ)

BX80556x1

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 472.40

Manufacturer: Intel Corporation

Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: IC	880000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	7300
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	41400

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
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Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Housing	58000
Antimony	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-A: Connector	6900
Antimony	Flame retardant	FCLGA4-A: Impeller	58000
Antimony	Flame retardant	FCLGA4-A: Diode	8500
Antimony	Flame retardant	FCLGA4-A: Diode	5700
Antimony	Flame retardant	FCLGA4-A: Hall Element	12000
Antimony	Flame retardant	FCLGA4-A: IC	5100
Antimony	Flame retardant	FCLGA4-A: IC	13100
Antimony	Flame retardant	FCLGA4-A: Transistor	6600
Bismuth	Main Material	FCLGA4-A: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Transistor	20800
Brominated Flame Retardant	Flame retardant	Cedar Mill	2130
Nickel	Electronic and Mechanical components and materials	Cedar Mill	7710
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Coil spring	84100
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	65000



Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	29100

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80556x1. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.
2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-T EE (NDJ)

BX80547Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 471.90

Manufacturer: Intel Corporation

Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: IC	880000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	7300
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	41400

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
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Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Housing	58000
Antimony	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-A: Connector	6900
Antimony	Flame retardant	FCLGA4-A: Impeller	58000
Antimony	Flame retardant	FCLGA4-A: Diode	8500
Antimony	Flame retardant	FCLGA4-A: Diode	5700
Antimony	Flame retardant	FCLGA4-A: Hall Element	12000
Antimony	Flame retardant	FCLGA4-A: IC	5100
Antimony	Flame retardant	FCLGA4-A: IC	13100
Antimony	Flame retardant	FCLGA4-A: Transistor	6600
Bismuth	Main Material	FCLGA4-A: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Transistor	20800
Brominated Flame Retardant	Flame retardant	Prescott: Epoxy encapsulation material/Substrate	1870
Nickel	Electronic and Mechanical components and materials	Prescott: Substrate	12000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Coil spring	84100
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	65000

Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	29100

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.
2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-T BTX Type-1 MS (NDJ)  
BX80547PGxxxxT  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 196.10  
Manufacturer: Intel Corporation  
Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Diode	935000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Drive IC	881000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Resistor	7300
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Resistor	41400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Transistor	925000

## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-G: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-G: Impeller	100000
Antimony	Flame retardant	FCLGA4-G: Housing	100000
Antimony	Flame retardant	FCLGA4-G: Diode	8500
Antimony	Flame retardant	FCLGA4-G: Diode	5700
Antimony	Flame retardant	FCLGA4-G: Hall element	12000
Antimony	Flame retardant	FCLGA4-G: Drive IC	5100
Antimony	Flame retardant	FCLGA4-G: Drive IC	13100
Antimony	Flame retardant	FCLGA4-G: Drive IC	5900
Antimony	Flame retardant	FCLGA4-G: Transistor	5400
Antimony	Flame retardant	FCLGA4-G: Transistor	8800
Antimony	Flame retardant	FCLGA4-G: Transistor	6600
Bismuth	Main Material	FCLGA4-G: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Drive IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Drive IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Drive IC	12500
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Transistor	17500
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Transistor	8800
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Transistor	20800
Brominated Flame Retardant	Flame retardant	FCLGA4-G: PCB	90000
Brominated Flame Retardant	Flame retardant	Prescott: Epoxy encapsulation material/Substrate	1870
Nickel	Electronic and Mechanical components and materials	Prescott: Substrate	12000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Capacitor	65000

Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Resistor	29100
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Ball bearing (board)	89900

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547PGxxxxxT. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Prescott Skt-T BTX Type-1 Performance (NDJ)  
BX80547PGxxxxT  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 911.90  
Manufacturer: Intel Corporation  
Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Bearing Housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Diode	935000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Drive IC	881000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Transistor	925000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Resistor	3900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Resistor	4000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Resistor	41400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Resistor	9600



## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-H: Housing	50000
Antimony	Flame retardant	FCLGA4-H: Impeller	50000
Antimony	Flame retardant	FCLGA4-H: Diode	8500
Antimony	Flame retardant	FCLGA4-H: Diode	5700
Antimony	Flame retardant	FCLGA4-H: Hall element	7800
Antimony	Flame retardant	FCLGA4-H: Drive IC	5500
Antimony	Flame retardant	FCLGA4-H: Drive IC	13100
Antimony	Flame retardant	FCLGA4-H: Drive IC	6000
Antimony	Flame retardant	FCLGA4-H: Transistor	5400
Antimony	Flame retardant	FCLGA4-H: Transistor	8800
Antimony	Flame retardant	FCLGA4-H: Transistor	6600
Antimony	Flame retardant	FCLGA4-H: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-H: Connector	6900
Bismuth	Main Material	FCLGA4-H: Thermistor	6900
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Housing	150000
Brominated Flame Retardant	Flame retardant	FCLGA4-H: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Hall element	12300
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Drive IC	8200
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Drive IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Drive IC	12500
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Transistor	17500
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Transistor	8800
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Transistor	20800
Brominated Flame Retardant	Flame retardant	Prescott Skt-T: Epoxy encapsulation material/Subst	1870
Nickel	Electronic and Mechanical components and materials	Prescott Skt-T: Substrate	12000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Shaft	4400
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Coil Spring	84100
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Capacitor	42000

Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Capacitor	62000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Capacitor	27000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Resistor	36100
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Resistor	29100
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Ball bearing (board)	89900

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547PGxxxxxT. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.
2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Presler ATX 05A (NDJ)

BX805539xx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 472.40

Manufacturer: Intel Corporation

Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: IC	880000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	7300
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	41400

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
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Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Housing	58000
Antimony	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-A: Connector	6900
Antimony	Flame retardant	FCLGA4-A: Impeller	58000
Antimony	Flame retardant	FCLGA4-A: Diode	8500
Antimony	Flame retardant	FCLGA4-A: Diode	5700
Antimony	Flame retardant	FCLGA4-A: Hall Element	12000
Antimony	Flame retardant	FCLGA4-A: IC	5100
Antimony	Flame retardant	FCLGA4-A: IC	13100
Antimony	Flame retardant	FCLGA4-A: Transistor	6600
Bismuth	Main Material	FCLGA4-A: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Transistor	20800
Brominated Flame Retardant	Flame retardant	Presler:	2130
Nickel	Electronic and Mechanical components and materials	Presler:	7710
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Coil spring	84100
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	65000

Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	29100

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX805539xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.
2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Presler ATX 05B (NDJ)

BX805539xx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 597.40

Manufacturer: Intel Corporation

Revision Date: 6/21/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony		FCLGA4-D: Housing	58000
Antimony		FCLGA4-D: Insulator (lower)	100000
Antimony		FCLGA4-D: Connector	6900
Antimony		FCLGA4-D: Impeller	58000
Antimony		FCLGA4-D: Diode	8500
Antimony		FCLGA4-D: Diode	5700
Antimony		FCLGA4-D: Drive IC	5100
Antimony		FCLGA4-D: Drive IC	13100
Antimony		FCLGA4-D: Hall element	12000
Antimony		FCLGA4-D: Transistor	6600
Bismuth		FCLGA4-D: Thermistor	6980
Brominated Flame Retardant		FCLGA4-D: Housing	100000
Brominated Flame Retardant		FCLGA4-D: Insulator (lower)	100000
Brominated Flame Retardant		FCLGA4-D: PCB	90000
Brominated Flame Retardant		FCLGA4-D: Impeller	100000
Brominated Flame Retardant		FCLGA4-D: Diode	29900
Brominated Flame Retardant		FCLGA4-D: Diode	14400
Brominated Flame Retardant		FCLGA4-D: Drive IC	5100
Brominated Flame Retardant		FCLGA4-D: Hall element	8000
Brominated Flame Retardant		FCLGA4-D: Transistor	20800
Brominated Flame Retardant		Presler:	2130
Nickel		Presler:	7710
Nickel		FCLGA4-D: Capacitor	29000
Nickel		FCLGA4-D: Capacitor	65000
Nickel		FCLGA4-D: Zener diode	200000
Nickel		FCLGA4-D: Resistor	35900
Nickel		FCLGA4-D: Resistor	29100
Nickel		FCLGA4-D: Shaft	1900
Nickel		FCLGA4-D: Ball bearing (outer ring)	90000
Nickel		FCLGA4-D: Ball bearing (inner ring)	90000
Nickel		FCLGA4-D: Ball bearing (ball)	40000
Nickel		FCLGA4-D: Ball bearing (board)	89900
Nickel		FCLGA4-D: Coil spring	84100

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805539xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.





## Material Declaration Data Sheet

Boxed Presler BTX Type-1 (NDJ)

BX805539xxT

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 196.60

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Diode	9000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Drive IC	5000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Resistor	41400

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds

Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)
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If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-G: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-G: Impeller	58000
Antimony	Flame retardant	FCLGA4-G: Housing	58000
Antimony	Flame retardant	FCLGA4-G: Diode	8500
Antimony	Flame retardant	FCLGA4-G: Diode	5700
Antimony	Flame retardant	FCLGA4-G: Hall element	12000
Antimony	Flame retardant	FCLGA4-G: Drive IC	5100
Antimony	Flame retardant	FCLGA4-G: Connector	6900
Antimony	Flame retardant	FCLGA4-G: Transistor	6600
Bismuth	Main Material	FCLGA4-G: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Drive IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Drive IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Transistor	20800
Brominated Flame Retardant	Flame retardant	FCLGA4-G: PCB	90000
Brominated Flame Retardant	Flame retardant	Presler:	2130
Nickel	Electronic and Mechanical components and materials	Presler:	7710
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Resistor	29100
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Coil Spring	84100

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805539xxT. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Smithfield ATX 05A (NDJ)

BX80551Pxxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 471.90

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: IC	880000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	7300
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	41400

## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Housing	58000
Antimony	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-A: Connector	6900
Antimony	Flame retardant	FCLGA4-A: Impeller	58000
Antimony	Flame retardant	FCLGA4-A: Diode	8500
Antimony	Flame retardant	FCLGA4-A: Diode	5700
Antimony	Flame retardant	FCLGA4-A: Hall Element	12000
Antimony	Flame retardant	FCLGA4-A: IC	5100
Antimony	Flame retardant	FCLGA4-A: IC	13100
Antimony	Flame retardant	FCLGA4-A: Transistor	6600
Bismuth	Main Material	FCLGA4-A: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Transistor	20800
Brominated Flame Retardant	Flame retardant	Smithfield: Epoxy encapsulation material/Substrate	15300
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Coil spring	84100
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Shaft	1900

Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	29100

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551Pxxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS' RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Smithfield ATX 05B (NDJ)

BX80551Pxxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 546.90

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Drive IC	881000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Resistor	7300
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-D: Resistor	41400

**LEVEL B MATERIALS AND SUBSTANCES**

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.



	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-D: Housing	58000
Antimony	Flame retardant	FCLGA4-D: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-D: Connector	6900
Antimony	Flame retardant	FCLGA4-D: Impeller	58000
Antimony	Flame retardant	FCLGA4-D: Diode	8500
Antimony	Flame retardant	FCLGA4-D: Diode	5700
Antimony	Flame retardant	FCLGA4-D: Drive IC	5100
Antimony	Flame retardant	FCLGA4-D: Drive IC	13100
Antimony	Flame retardant	FCLGA4-D: Hall element	12000
Antimony	Flame retardant	FCLGA4-D: Transistor	6600
Bismuth	Main Material	FCLGA4-D: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-D: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Drive IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-D: Transistor	20800
Brominated Flame Retardant	Flame retardant	Smithfield: Epoxy encapsulation material/Substrate	15300
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Resistor	29100
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-D: Coil spring	84100

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Smithfield BTX Type-1 (NDJ)

BX80551PxxxxxT

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 196.10

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Diode	9000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Drive IC	5000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-G: Resistor	41400

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
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Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-G: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-G: Impeller	58000
Antimony	Flame retardant	FCLGA4-G: Housing	58000
Antimony	Flame retardant	FCLGA4-G: Diode	8500
Antimony	Flame retardant	FCLGA4-G: Diode	5700
Antimony	Flame retardant	FCLGA4-G: Hall element	12000
Antimony	Flame retardant	FCLGA4-G: Drive IC	5100
Antimony	Flame retardant	FCLGA4-G: Connector	6900
Antimony	Flame retardant	FCLGA4-G: Transistor	6600
Bismuth	Main Material	FCLGA4-G: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Drive IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Drive IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-G: Transistor	20800
Brominated Flame Retardant	Flame retardant	FCLGA4-G: PCB	90000
Brominated Flame Retardant	Flame retardant	Smithfield: Epoxy encapsulation material/Substrate	15300
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Resistor	29100
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-G: Coil Spring	84100

## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551PxxxxxT. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Paxville-DP Active (NDJ)

BX80551KG2800HA

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 1030.50

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Paxville-DP: FLI	1320
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Drive IC	881000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Resistor	6500
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Resistor	4000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Resistor	41400
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Transistor	925000

## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	uFCPGA4-A: Insulator (lower)	100000
Antimony	Flame retardant	uFCPGA4-A: Impeller	58000
Antimony	Flame retardant	uFCPGA4-A: Housing	58000
Antimony	Flame retardant	uFCPGA4-A: Diode	8500
Antimony	Flame retardant	uFCPGA4-A: Diode	5700
Antimony	Flame retardant	uFCPGA4-A: Hall element	12000
Antimony	Flame retardant	uFCPGA4-A: Drive IC	5100
Antimony	Flame retardant	uFCPGA4-A: Drive IC	13100
Antimony	Flame retardant	uFCPGA4-A: Drive IC	12500
Antimony	Flame retardant	uFCPGA4-A: Connector	7693
Antimony	Flame retardant	uFCPGA4-A: Transistor	5400
Antimony	Flame retardant	uFCPGA4-A: Transistor	8800
Antimony	Flame retardant	uFCPGA4-A: Transistor	6600
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Impeller	100000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Housing	100000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Diode	29900
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Diode	14400
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Hall element	8000

Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Drive IC	5100
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Drive IC	13100
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: PCB	150000
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Transistor	17500
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Transistor	8800
Brominated Flame Retardant	Flame retardant	uFCPGA4-A: Transistor	20800
Brominated Flame Retardant	Flame retardant	Paxville-DP: Epoxy encapsulation material	10400
Nickel	Electronic and Mechanical components and materials	Paxville-DP: Substrate / SLI	5250
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Capacitor	12800
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Capacitor	42000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Resistor	35900
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Shaft	1900
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Coil Spring	84100
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Spacer	94500
Nickel	Electronic and Mechanical components and materials	uFCPGA4-A: Screw	96200

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551KG2800HA. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.





## Material Declaration Data Sheet

Boxed Prescott ICP Skt-N (FJJ)

BX80546RExxx C

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 469.70

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Prescott: Epoxy encapsulation material	4730
Lead/Lead Compounds	Electronic Components and Materials	Prescott: Substrate / SLI	8050
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Capacitor (Ceramic Body), CA-1	83971
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Diode (Glass Tube), DI-3	530000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Diode (Die Solder), DI-4	906000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546RExxxC. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS' RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Prescott ICP Skt-T (FJJ)  
BX80547RExxxxC  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 376.70  
Manufacturer: Intel Corporation  
Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-F: Fan	1876
Nickel	Electronic and Mechanical components and materials	Prescott Skt-T: Substrate	12000

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547RExxx.C. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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# Material Declaration Data Sheet

Boxed CedarMill ATX (FJJ)  
BX80556x1

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 484.40

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

## Restrictions on Hazardous Substances (RoHS) Compliance

### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

## LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor (RK73B)	1272561
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Capacitor (C0805E 105 M025T)	105654
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Capacitor (C0805E 474 M025T)	105654
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	906000

## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Nickel	Electronic and Mechanical components and materials	Cedar Mill:	7710

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80556x1. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-T (FJJ)

BX80547Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 376.70

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-F: Fan	1876
Nickel	Electronic and Mechanical components and materials	Prescott Skt-T: Substrate	12000

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-T EE (FJJ)  
BX80547Pxxxxxx  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 483.90  
Manufacturer: Intel Corporation  
Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor (RK73B)	1272561
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Capacitor (C0805E 105 M025T)	105654
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Capacitor (C0805E 474 M025T)	105654
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	906000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Nickel	Electronic and Mechanical components and materials	Prescott: Substrate	12000

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80547Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Presler ATX 05A (FJJ)

BX805539xx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 484.40

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor (RK73B)	1272561
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Capacitor (C0805E 105 M025T)	105654
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Capacitor (C0805E 474 M025T)	105654
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	906000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Nickel	Electronic and Mechanical components and materials	Presler:	7710

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX805539xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Smithfield ATX 05A (FJJ)

BX80551Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 483.90

Manufacturer: Intel Corporation

Revision Date: 6/22/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor (RK73B)	1272561
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Capacitor (C0805E 105 M025T)	105654
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Capacitor (C0805E 474 M025T)	105654
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	906000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551Pxxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Irwindale Active (FJJ)  
BX80546KGxxxFA  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 962.50  
Manufacturer: Intel Corporation  
Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Fan	989971

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Irwindale: Epoxy encapsulation material	5810
Nickel	Electronic and Mechanical components and materials	Irwindale: Substrate / SLI	5620

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546KGxxxxFA. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.
2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Irwindale 2U Passive (FJJ)  
BX80546KGxxxFP,  
BX80546JG3000FP  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 1062.50  
Manufacturer: Intel Corporation  
Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Irwindale: Epoxy encapsulation material	5810
Nickel	Electronic and Mechanical components and materials	Irwindale: Substrate / SLI	5620

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546KGxxxxFP, BX80546JG3000FP. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Irwindale 2U Passive (FRJ)  
BX80546KGxxxFP,  
BX80546JG3000FP  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 982.50  
Manufacturer: Intel Corporation  
Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Irwindale: Epoxy encapsulation material	5810
Nickel	Electronic and Mechanical components and materials	Irwindale: Substrate / SLI	5620

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546KGxxxxFP, BX80546JG3000FP. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Irwindale 1U Passive  
BX80546KGxxxFU,  
BX80546JG3000FU  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 597.50  
Manufacturer: Intel Corporation  
Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Irwindale: Epoxy encapsulation material	5810
Nickel	Electronic and Mechanical components and materials	Irwindale: Substrate / SLI	5620

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546KGxxxxFU, BX80546JG3000FU. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Paxville-DP Active (FJJ)  
BX80551KG2800HA  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 975.50  
Manufacturer: Intel Corporation  
Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Paxville-DP: FLI	1320
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA4-A: Fan	989971

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Paxville-DP: Epoxy encapsulation material	10400
Nickel	Electronic and Mechanical components and materials	Paxville-DP: Substrate / SLI	5250

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551KG2800HA. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.
2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.





## Material Declaration Data Sheet

Boxed Paxville-DP 2U Passive (FJJ)  
BX80551KG2800HP  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 1075.50  
Manufacturer: Intel Corporation  
Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Paxville-DP: FLI	1320

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Paxville-DP: Epoxy encapsulation material	10400
Nickel	Electronic and Mechanical components and materials	Paxville-DP: Substrate / SLI	5250

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551KG2800HP. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Paxville-DP 1U Passive  
BX80551KG2800HU  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 610.50  
Manufacturer: Intel Corporation  
Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Paxville-DP: FLI	1320

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Paxville-DP: Epoxy encapsulation material	10400
Nickel	Electronic and Mechanical components and materials	Paxville-DP: Substrate / SLI	5250

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551KG2800HU. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Paxville-DP 2U Passive (FRJ)

BX80551KG2800HP

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 995.50

Manufacturer: Intel Corporation

Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Paxville-DP: FLI	1320

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Paxville-DP: Epoxy encapsulation material	10400
Nickel	Electronic and Mechanical components and materials	Paxville-DP: Substrate / SLI	5250

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551KG2800HP. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Paxville-MP

BX80560Kxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 570.60

Manufacturer: Intel Corporation

Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Paxville-MP: FLI	1400

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Paxville-MP: Epoxy Encapsulation material	3470
Nickel	Electronic and Mechanical components and materials	Paxville-MP: Substrate/FLI	9790

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80560Kxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.





## Material Declaration Data Sheet

Boxed Dempsey Active (NDJ)  
BX805550x0A

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 742.50

Manufacturer: Intel Corporation

Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Diode	935000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Transistor	880000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Resistor	3900
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Resistor	41400
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Resistor	9600

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	LGA771-A: Housing	58000
Antimony	Flame retardant	LGA771-A: Diode	5700
Antimony	Flame retardant	LGA771-A: Hall element	6700
Antimony	Flame retardant	LGA771-A: Drive IC	20200
Antimony	Flame retardant	LGA771-A: Zener diode	15000
Antimony	Flame retardant	LGA771-A: Transistor	5400
Antimony	Flame retardant	LGA771-A: Transistor	6700
Antimony	Flame retardant	LGA771-A: Transistor	11800
Antimony	Flame retardant	LGA771-A: Transistor	7300
Antimony	Flame retardant	LGA771-A: Connector	7693
Antimony	Flame retardant	LGA771-A: Insulator (lower)	50000
Antimony	Flame retardant	LGA771-A: Impeller	58000
Bismuth	Main Material	LGA771-A: Thermistor	6900
Brominated Flame Retardant	Flame retardant	LGA771-A: Housing	100000
Brominated Flame Retardant	Flame retardant	LGA771-A: PCB	150000
Brominated Flame Retardant	Flame retardant	LGA771-A: Diode	14400
Brominated Flame Retardant	Flame retardant	LGA771-A: Hall element	10300
Brominated Flame Retardant	Flame retardant	LGA771-A: Zener diode	85000
Brominated Flame Retardant	Flame retardant	LGA771-A: Transistor	17500
Brominated Flame Retardant	Flame retardant	LGA771-A: Transistor	21200
Brominated Flame Retardant	Flame retardant	LGA771-A: Transistor	11200
Brominated Flame Retardant	Flame retardant	LGA771-A: Transistor	7300
Brominated Flame Retardant	Flame retardant	LGA771-A: Insulator (lower)	150000
Brominated Flame Retardant	Flame retardant	LGA771-A: Impeller	100000
Brominated Flame Retardant	Flame retardant	Dempsey	2020
Nickel	Electronic and Mechanical components and materials	Dempsey	4190
Nickel	Electronic and Mechanical components and materials	LGA771-A: Capacitor	23000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Zener diode	33000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Resistor	36100
Nickel	Electronic and Mechanical components and materials	LGA771-A: Resistor	29100
Nickel	Electronic and Mechanical components and materials	LGA771-A: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Ball bearing (LGA771-A: Ball)	40000

Nickel	Electronic and Mechanical components and materials	LGA771-A: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	LGA771-A: Coil Spring	84100
Nickel	Electronic and Mechanical components and materials	LGA771-A: Heat sink (spacer)	91800
Nickel	Electronic and Mechanical components and materials	LGA771-A: Heat sink (screw)	96000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Heat sink (coil spring)	84400
Nickel	Electronic and Mechanical components and materials	LGA771-A: Heat sink (screw)	96000

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX805550x0A. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Dempsey Passive (FJJ)  
BX805550x0P  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 1062.50  
Manufacturer: Intel Corporation  
Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Dempsey	2020
Nickel	Electronic and Mechanical components and materials	Dempsey	4190

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805550x0P. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Dempsey Passive (FRJ)  
BX805550x0P

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 982.50

Manufacturer: Intel Corporation

Revision Date: 6/23/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Dempsey	2020
Nickel	Electronic and Mechanical components and materials	Dempsey	4190

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805550x0P. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed CedarMill ICP (SDJ)

BX805523xx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 411.90

Manufacturer: Intel Corporation

Revision Date: 6/29/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Electronic components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Electronic components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.



	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-F: Resin parts (Frame, insulator, etc.)	3300
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Resin parts (Frame, insulator, etc.)	12000
Brominated Flame Retardant	Flame retardant	Cedar Mill	2130
Nickel	Electronic and Mechanical components and materials	Cedar Mill	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805523xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed CedarMill ICP (NDJ)

BX805523xx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 356.90

Manufacturer: Intel Corporation

Revision Date: 6/29/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Diode	9000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Drive IC	5000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-F: Resistor	41400

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-F: Insulator (Lower)	100000
Antimony	Flame retardant	FCLGA4-F: Impeller	58000
Antimony	Flame retardant	FCLGA4-F: Housing	58000
Antimony	Flame retardant	FCLGA4-F: Diode	8500
Antimony	Flame retardant	FCLGA4-F: Diode	5700
Antimony	Flame retardant	FCLGA4-F: Hall element	12000
Antimony	Flame retardant	FCLGA4-F: Drive IC	5100
Antimony	Flame retardant	FCLGA4-F: Connector	6900
Antimony	Flame retardant	FCLGA4-F: Transistor	6600
Bismuth	Main Material	FCLGA4-F: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Insulator (Lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Impeller	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Housing	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Hall element	8000
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Drive IC	5100
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Drive IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-F: Transistor	20800
Brominated Flame Retardant	Flame retardant	FCLGA4-F: PCB	90000
Brominated Flame Retardant	Flame retardant	Cedar Mill:	2130
Nickel	Electronic and Mechanical components and materials	Cedar Mill:	7710
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Resistor	29100
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Ball Bearing	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Ball FCLGA4-F: Bearing (FCLGA4-F: Board)	89900
Nickel	Electronic and Mechanical components and materials	FCLGA4-F: Coil Spring	84100

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX805523xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed CedarMill ICP (FJJ)

BX805523xx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 376.70

Manufacturer: Intel Corporation

Revision Date: 6/29/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-F: Fan	1876
Brominated Flame Retardant	Flame retardant	Cedar Mill:	2130
Nickel	Electronic and Mechanical components and materials	Cedar Mill:	7710

## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX805523xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-N (SDJ)

BX80546Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 469.70

Manufacturer: Intel Corporation

Revision Date: 6/29/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	uFCPGA2-J: Resin Parts (Frame, insulator, etc.)	4700
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Resin Parts (Frame, insulator, etc.)	1800
Brominated Flame Retardant	Flame retardant	Prescott: Epoxy encapsulation material	4730
Nickel	Electronic and Mechanical components and materials	Prescott: Substrate / SLI	8050

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-N (NDJ)

BX80546Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 459.70

Manufacturer: Intel Corporation

Revision Date: 6/29/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Prescott: Epoxy encapsulation material	4730
Lead/Lead Compounds	Electronic Components and Materials	Prescott: Substrate / SLI	8050
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Bearing housing	25000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Drive IC	881000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Resistor	7300
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Resistor	1900
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Resistor	42400

## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	uFCPGA2-J: Insulator (Lower)	100000
Antimony	Flame retardant	uFCPGA2-J: Impeller	58000
Antimony	Flame retardant	uFCPGA2-J: Housing	58000
Antimony	Flame retardant	uFCPGA2-J: Diode	5700
Antimony	Flame retardant	uFCPGA2-J: Hall element	12000
Antimony	Flame retardant	uFCPGA2-J: Drive IC	13100
Bismuth	Main Material	uFCPGA2-J: Thermistor	6980
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Insulator (Lower)	100000
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Impeller	100000
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Housing	100000
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Diode	14400
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Hall element	8000
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: Drive IC	13100
Brominated Flame Retardant	Flame retardant	uFCPGA2-J: PCB	23000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Ball bearing (outer ring)	20000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Ball bearing (inner ring):	20000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Ball bearing (ball):	40000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Ball bearing (board):	91500
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Coil spring	84100
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Shaft	1900
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Resistor	35900
Nickel	Electronic and Mechanical components and materials	uFCPGA2-J: Resistor	23100

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Prescott Skt-N (FJJ)

BX80546Pxxxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 469.70

Manufacturer: Intel Corporation

Revision Date: 6/29/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Prescott: Epoxy encapsulation material	4730
Lead/Lead Compounds	Electronic Components and Materials	Prescott: Substrate / SLI	8050
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Capacitor (Ceramic Body), CA-1	83971
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Diode (Glass Tube), DI-3	530000
Lead/Lead Compounds	Electronic Components and Materials	uFCPGA2-J: Diode (Die Solder), DI-4	906000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546Pxxxxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Smithfield BTX Type-1 Performance (NDJ)  
BX80551PGxxxFT  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 911.90  
Manufacturer: Intel Corporation  
Revision Date: 6/29/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Smithfield: FLI	2010
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Bearing Housing	25000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Diode	935000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Drive IC	881000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Transistor	925000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Resistor	3900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Resistor	4000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Resistor	41400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-H: Resistor	9600

## LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-H: Connector	6900
Antimony	Flame retardant	FCLGA4-H: Housing	50000
Antimony	Flame retardant	FCLGA4-H: Impeller	50000
Antimony	Flame retardant	FCLGA4-H: Diode	8500
Antimony	Flame retardant	FCLGA4-H: Diode	5700
Antimony	Flame retardant	FCLGA4-H: Hall element	7800
Antimony	Flame retardant	FCLGA4-H: Drive IC	5500
Antimony	Flame retardant	FCLGA4-H: Drive IC	13100
Antimony	Flame retardant	FCLGA4-H: Drive IC	6000
Antimony	Flame retardant	FCLGA4-H: Transistor	5400
Antimony	Flame retardant	FCLGA4-H: Transistor	8800
Antimony	Flame retardant	FCLGA4-H: Transistor	6600
Antimony	Flame retardant	FCLGA4-H: Insulator (lower)	100000
Bismuth	Main Material	FCLGA4-H: Thermistor	6900
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Housing	150000
Brominated Flame Retardant	Flame retardant	FCLGA4-H: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Diode	29900
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Hall element	12300

Brominated Flame Retardant	Flame retardant	FCLGA4-H: Drive IC	8200
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Drive IC	13100
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Drive IC	12500
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Transistor	17500
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Transistor	8800
Brominated Flame Retardant	Flame retardant	FCLGA4-H: Transistor	20800
Brominated Flame Retardant	Flame retardant	Smithfield: Epoxy encapsulation material/Substrate	15300
Nickel	Electronic and Mechanical components and materials	Smithfield: Substrate	20900
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Shaft	4400
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Coil Spring	84100
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Capacitor	42000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Capacitor	62000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Capacitor	27000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Resistor	36100
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Resistor	29100
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Ball bearing (ball)	40000
Nickel	Electronic and Mechanical components and materials	FCLGA4-H: Ball bearing (board)	89900

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80551PGxxxFT. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.
2. This data sheet is based on the product specified and other packages are assumed to be similar.
3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.
4. Material mass can be estimated by multiplying concentration (ppm) by product weight.
5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.





## Material Declaration Data Sheet

Boxed Conroe ATX (SDJ)

BX80557E6xxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 512.10

Manufacturer: Intel Corporation

Revision Date: 7/6/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-L: Resin Parts (Frame, Insulator, etc.)	2700
Brominated Flame Retardant	Flame retardant	FCLGA4-L: Resin Parts (Frame, Insulator, etc.)	9400
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80557E6xxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Conroe XE ATX (SDJ)

BX80557Xxxxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 597.10

Manufacturer: Intel Corporation

Revision Date: 7/6/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-O: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-O: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-O: Resin Parts (Frame, Insulator, etc.)	2700
Brominated Flame Retardant	Flame retardant	FCLGA4-O: Resin Parts (Frame, Insulator, etc.)	9400
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80557Xxxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Dempsey Active (SDJ)  
BX805550x0A  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 797.50  
Manufacturer: Intel Corporation  
Revision Date: 7/6/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Electronic components	530000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Electronic components	850000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Tapping Bush	37000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	LGA771-A: Resin parts	1900
Brominated Flame Retardant	Flame retardant	LGA771-A: Resin parts	10000
Brominated Flame Retardant	Flame retardant	Dempsey	2020
Nickel	Electronic and Mechanical components and materials	Dempsey	4190

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX805550x0A. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Conroe ATX (NDJ)

BX80557E6xxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 472.10

Manufacturer: Intel Corporation

Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	8300
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: IC	5200
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	3900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	1700

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Housing	80000
Antimony	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-A: Connector	6900
Antimony	Flame retardant	FCLGA4-A: Impeller	80000
Antimony	Flame retardant	FCLGA4-A: Diode	5700
Antimony	Flame retardant	FCLGA4-A: Hall Element	8000
Antimony	Flame retardant	FCLGA4-A: IC	6100
Antimony	Flame retardant	FCLGA4-A: Transistor	6600
Bismuth	Main Material	FCLGA4-A: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Housing	150000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Impeller	150000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Hall element	12000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	9200
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Thermistor	12300
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Transistor	20800
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Magnet	20000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	36100
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	29700
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	23400
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Transistor	122500
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Hall element	3400

## COMMENTS



1. The information on materials and substances listed above is based on the following package: Item Market Name BX80557E6xxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Conroe ATX (DLT)  
BX80557E6xxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 469.10

Manufacturer: Intel Corporation

Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in steel containing up to 0.35% lead by weight.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Steel Case	2500
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Copper Bushing	19000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Electronic Components	15000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Brominated Flame Retardant	Flame retardant	FCLGA4-L: Frame and Impeller	210000
Nickel	Electronic and Mechanical components and materials	FCLGA4-L: Clip Plating	5145
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80557E6xxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Woodcrest Active (NDJ)  
BX8055651x0A  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 743.78  
Manufacturer: Intel Corporation  
Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Diode	925000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Diode	935000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Transistor	880000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Resistor	3900
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Resistor	41400
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Resistor	9600

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	LGA771-A: Housing	58000
Antimony	Flame retardant	LGA771-A: Diode	5700
Antimony	Flame retardant	LGA771-A: Hall element	6700
Antimony	Flame retardant	LGA771-A: Drive IC	20200
Antimony	Flame retardant	LGA771-A: Zener diode	15000
Antimony	Flame retardant	LGA771-A: Transistor	5400
Antimony	Flame retardant	LGA771-A: Transistor	6700
Antimony	Flame retardant	LGA771-A: Transistor	11800
Antimony	Flame retardant	LGA771-A: Transistor	7300
Antimony	Flame retardant	LGA771-A: Connector	7693
Antimony	Flame retardant	LGA771-A: Insulator (lower)	50000
Antimony	Flame retardant	LGA771-A: Impeller	58000
Bismuth	Main Material	LGA771-A: Thermistor	6900
Brominated Flame Retardant	Flame retardant	LGA771-A: Housing	100000
Brominated Flame Retardant	Flame retardant	LGA771-A: PCB	150000
Brominated Flame Retardant	Flame retardant	LGA771-A: Diode	14400
Brominated Flame Retardant	Flame retardant	LGA771-A: Hall element	10300
Brominated Flame Retardant	Flame retardant	LGA771-A: Zener diode	85000
Brominated Flame Retardant	Flame retardant	LGA771-A: Transistor	17500
Brominated Flame Retardant	Flame retardant	LGA771-A: Transistor	21200
Brominated Flame Retardant	Flame retardant	LGA771-A: Transistor	11200
Brominated Flame Retardant	Flame retardant	LGA771-A: Transistor	7300
Brominated Flame Retardant	Flame retardant	LGA771-A: Insulator (lower)	150000
Brominated Flame Retardant	Flame retardant	LGA771-A: Impeller	100000
Brominated Flame Retardant	Flame retardant	Woodcrest: Epoxy Encapsulation material	2020
Nickel	Electronic and Mechanical components and materials	Woodcrest: Substrate	6140
Nickel	Electronic and Mechanical components and materials	LGA771-A: Capacitor	23000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Zener diode	33000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Resistor	36100
Nickel	Electronic and Mechanical components and materials	LGA771-A: Resistor	29100
Nickel	Electronic and Mechanical components and materials	LGA771-A: Ball bearing (outer ring)	90000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Ball bearing (inner ring)	90000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Ball bearing (LGA771-A: Ball)	40000

Nickel	Electronic and Mechanical components and materials	LGA771-A: Ball bearing (board)	89900
Nickel	Electronic and Mechanical components and materials	LGA771-A: Coil Spring	84100
Nickel	Electronic and Mechanical components and materials	LGA771-A: Heat sink (spacer)	91800
Nickel	Electronic and Mechanical components and materials	LGA771-A: Heat sink (screw)	96000
Nickel	Electronic and Mechanical components and materials	LGA771-A: Heat sink (coil spring)	84400
Nickel	Electronic and Mechanical components and materials	LGA771-A: Heat sink (screw)	96000

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055651x0A. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Woodcrest Active (SDJ)  
BX8055651x0A  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 798.78  
Manufacturer: Intel Corporation  
Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Electronic components	530000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Electronic components	850000
Lead/Lead Compounds	Electronic Components and Materials	LGA771-A: Tapping Bush	37000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	LGA771-A: Resin parts	1900
Brominated Flame Retardant	Flame retardant	LGA771-A: Resin parts	10000
Brominated Flame Retardant	Flame retardant	Woodcrest: Epoxy Encapsulation material	2020
Nickel	Electronic and Mechanical components and materials	Woodcrest: Substrate	6140

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## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055651x0A. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Woodcrest Passive (FJJ)

BX8055651x0P

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 1063.78

Manufacturer: Intel Corporation

Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Woodcrest: Epoxy Encapsulation material	2020
Nickel	Electronic and Mechanical components and materials	Woodcrest: Substrate	6140

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055651x0P. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Woodcrest Passive (FRJ)

BX8055651x0P

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 983.78

Manufacturer: Intel Corporation

Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant		Woodcrest: Epoxy Encapsulation material	2020
Nickel		Woodcrest: Substrate	6140

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055651x0P. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Cranford  
BX80546KF3x60E  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 561.79  
Manufacturer: Intel Corporation  
Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in aluminum containing up to 0.4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in steel containing up to 0.35% lead by weight.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Cranford: Epoxy Encapsulation material	6680
Nickel	Electronic and Mechanical components and materials	Cranford: Substrate/FLI	6760

## COMMENTS

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1. The information on materials and substances listed above is based on the following package: Item Market Name BX80546KF3x60E. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

INTEL ACCEPTS NO DUTY TO UPDATE THIS MDDS OR TO NOTIFY USERS OF THIS MDDS OF UPDATES OR CHANGES TO THIS MDDS. INTEL SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, CONSEQUENTIAL OR OTHERWISE, SUFFERED BY USERS OR THIRD PARTIES AS A RESULT OF THE USERS' RELIANCE ON INFORMATION IN THIS MDDS THAT HAS BEEN UPDATED OR CHANGED.



## Material Declaration Data Sheet

Boxed Montecito  
BX8054990xx  
Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 581.50  
Manufacturer: Intel Corporation  
Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications. The applicability of this exemption depends on use of the part in one of the listed exempt applications.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	Montecito: FLI	2500
Lead/Lead Compounds	Electronic Components and Materials	FCPGA4-A: Heatsink solder	298371

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Nickel	Electronic and Mechanical components and materials	Montecito: Substrate	28800

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX8054990xx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Conroe ATX (FXC)

BX80557E6xxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 577.40

Manufacturer: Intel Corporation

Revision Date: 7/18/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Resistor	493000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Diode Solder	936000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710
Nickel	Electronic and Mechanical components and materials	FCLGA4-L: Clip Plating	1000000

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80557E6xxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed Conroe ATX (FJJ)

BX80557E6xxx

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 492.10

Manufacturer: Intel Corporation

Revision Date: 8/25/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX80557E6xxx. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed UP Xeon (SDJ)  
BX8055730x0

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 512.10

Manufacturer: Intel Corporation

Revision Date: 8/25/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Electronic Components	530000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Electronic Components	850000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-L: Resin Parts (Frame, Insulator, etc.)	2700
Brominated Flame Retardant	Flame retardant	FCLGA4-L: Resin Parts (Frame, Insulator, etc.)	9400
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055730x0. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed UP Xeon (NDJ)

BX8055730x0

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 472.10

Manufacturer: Intel Corporation

Revision Date: 8/25/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Diode	8300
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: IC	5200
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Zener diode	251400
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	3900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	31900
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-A: Resistor	1700

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Antimony	Flame retardant	FCLGA4-A: Housing	80000
Antimony	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Antimony	Flame retardant	FCLGA4-A: Connector	6900
Antimony	Flame retardant	FCLGA4-A: Impeller	80000
Antimony	Flame retardant	FCLGA4-A: Diode	5700
Antimony	Flame retardant	FCLGA4-A: Hall Element	8000
Antimony	Flame retardant	FCLGA4-A: IC	6100
Antimony	Flame retardant	FCLGA4-A: Transistor	6600
Bismuth	Main Material	FCLGA4-A: Thermistor	6980
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Housing	150000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Insulator (lower)	100000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Impeller	150000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: PCB	90000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Diode	14400
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Hall element	12000
Brominated Flame Retardant	Flame retardant	FCLGA4-A: IC	9200
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Thermistor	12300
Brominated Flame Retardant	Flame retardant	FCLGA4-A: Transistor	20800
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Shaft	1900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Magnet	20000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	29000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Capacitor	65000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Zener diode	200000
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	35900
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	36100
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	29700
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Resistor	23400
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Transistor	122500
Nickel	Electronic and Mechanical components and materials	FCLGA4-A: Hall element	3400

## COMMENTS



1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055730x0. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed UP Xeon (FJJ)  
BX8055730x0

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 492.10

Manufacturer: Intel Corporation

Revision Date: 8/25/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds			

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710

### COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055730x0. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed UP Xeon (FXC)

BX8055730x0

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 577.40

Manufacturer: Intel Corporation

Revision Date: 8/25/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

\* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)

\* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in optical and filter glass.

\* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Resistor	493000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Diode Solder	936000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710
Nickel	Electronic and Mechanical components and materials	FCLGA4-L: Clip Plating	1000000

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055730x0. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

3. Data in parts per million (ppm) can be used to estimate content for other packages assumed to be similar.

4. Material mass can be estimated by multiplying concentration (ppm) by product weight.

5. The remainder of this package consists of non-reportable metals (e.g., tin, iron, etc), epoxy resin and other non-metal materials.

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## Material Declaration Data Sheet

Boxed UP Xeon (DLT)  
BX8055730x0

Pb Free Product: Yes-Second Level Interconnect

Product Weight (grams): 469.10

Manufacturer: Intel Corporation

Revision Date: 8/25/2006

### Restrictions on Hazardous Substances (RoHS) Compliance

#### RoHS Definition

- \* Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE)
- \* Quantity limit of 0.01% by mass (100 PPM) of homogeneous material for: Cadmium

Intel understands RoHS requires: Lead and other materials banned in RoHS Directive are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies. (Note: RoHS implementation details are not fully defined and may change.)

#### RoHS Declaration

- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in copper containing up to 4% lead by weight.
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead in electronic ceramic parts (e.g. piezoelectronic devices).
- \* The part does not contain RoHS restricted substances per the definition above except lead, which is used under the following exemption: Lead as an alloying element in steel containing up to 0.35% lead by weight.

Where the part is declared to meet RoHS requirements, it has been verified to be in conformance with 2002/95/EC as we currently understand the requirements. Intel has systems in place to verify conformance with all applicable environmental requirements and to the best of our knowledge the information is true and correct.

### LEVEL A MATERIALS AND SUBSTANCES

Materials from Annex A of the EIA/EICTA/JGPSSI Material Composition Declaration Guide and listed in the table below are not contained in this product in quantities above the threshold level for these materials as stated in the EIA/EICTA/JGPSSI Material Composition Declaration Guide, nor intentionally added to this product.

Asbestos	Mercury / Mercury Compounds	Polychlorinated Naphthalenes
Azo colorants	Ozone Depleting Substances	Radioactive Substances
Cadmium / Cadmium Compounds	Polybrominated Biphenyls (PBBs)	Shortchain Chlorinated Paraffins
Hexavalent Chromium	Polybrominated Diphenylethers (PBDEs)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Hexavalent Chromium Compounds	Polychlorinated Biphenyls (PCBs)	Tributyl Tin Oxide (TBTO)

If this product contains lead (Pb) above the threshold limit of 1000 ppm, the concentration, location and use for this product are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Steel Case	2500
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Copper Bushing	19000
Lead/Lead Compounds	Electronic Components and Materials	FCLGA4-L: Electronic Components	15000

### LEVEL B MATERIALS AND SUBSTANCES

Antimony/Antimony Compounds	Bismuth/Bismuth Compounds	Phthalates
Arsenic/Arsenic Compounds	Brominated Flame Retardants	Selenium/Selenium Compounds
Beryllium/Beryllium Compounds	Nickel/Nickel Compounds	Vinyl Chloride Polymer (PVC)

If this product contains materials listed in Annex B of the EIA/EICTA/JGPSSI Material Composition Declaration Guide above the threshold level of 1000 ppm, those materials/substances are listed below.

	Description of Use	Location in Product	Material Concentration (ppm)
Brominated Flame Retardant	Flame retardant	Conroe: Epoxy Encapsulation/Substrate	2130
Brominated Flame Retardant	Flame retardant	FCLGA4-L: Frame and Impeller	210000
Nickel	Electronic and Mechanical components and materials	FCLGA4-L: Clip Plating	5145
Nickel	Electronic and Mechanical components and materials	Conroe: Substrate	7710

## COMMENTS

1. The information on materials and substances listed above is based on the following package: Item Market Name BX8055730x0. Material content listed at the product level are based on analytical testing intended to validate Intel's RoHS Compliance Systems. Material content listed for individual components are engineering model approximations based on supplier data and/or analytical testing. Results may vary due to differences in production and /or sensitivities of the methods and tools used for analytical testing and modeling. Intel's certification of RoHS compliance at the homogenous material level is based on Supplier Declarations of Conformance.

2. This data sheet is based on the product specified and other packages are assumed to be similar.

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